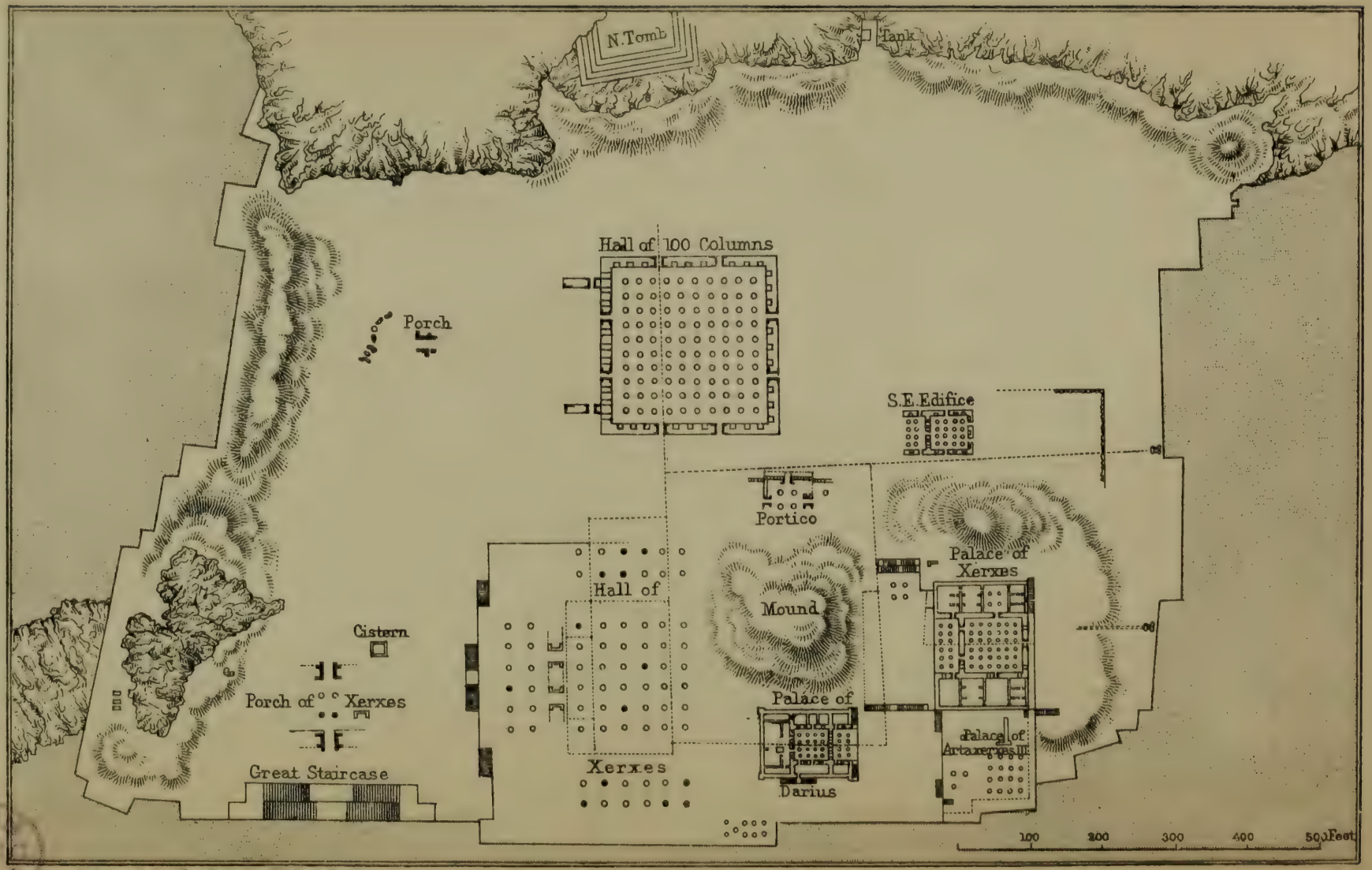
THE DISCOVERY AND DECIPHERMENT OF THE TRILINGUAL CUNEIFORM INSCRIPTIONS BY A. J. BOOTH

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THE

TRILINGUAL CUNEIFORM INSCRIPTIONS



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PLAN OF PERSEPOLIS.

(From Curzon's "Persia and the Persian Question")

THE DISCOVERY AND DECIPHERMENT OF THE TRILINGUAL CUNEIFORM INSCRIPTIONS

BY

ARTHUR JOHN BOOTH, M.A.

WITH A PLAN

LONGMANS, GREEN, AND CO.
39 PATERNOSTER ROW, LONDON
NEW YORK AND BOMBAY
1902

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[The Plan of Persepolis is inserted by kind permission of Lord Curzon of Kedleston from his work 'Persia and the Persian Question.']

INTRODUCTION

The decipherment of the cuneiform inscriptions of Western Asia is worthy of being included among the great achievements of the nineteenth century. Only a hundred years ago it was still possible to maintain that there was no such thing as cuneiform writing, and that the mysterious figures that went by that name were merely a grotesque form of ornamentation. We propose to recount the method pursued by the long succession of scholars who in the end succeeded in solving the perplexing problem that was presented to them. Few, if any, of those who, in the beginning of last century, occupied themselves with the subject, could have imagined the brilliant discoveries that would result from their tedious labours. In these pages we shall be chiefly occupied with the inscriptions of the Achaemenian kings. They were the first to be discovered and studied, and they possess the peculiar advantage of being, with few exceptions, trilingual. They are, in fact, generally found in three parallel columns, and it was seen that the characters and no doubt the languages also varied in each. It was observed that the writing in one of the columns was much simpler than in the others; the number of

different signs being limited to about forty-two. It was assumed that they were alphabetical, whereas there could be little doubt from their great number that the signs in the other columns were syllabic or ideographic. Notwithstanding the comparative simplicity of the former, it was not till forty years had been devoted to their study that the riddle was successfully solved. At length the sound of each letter was fully established, and the words they combined to form were found to belong to a language, akin to Zend, to which the name of Old Persian is now given. From its analogy to Zend and Pehlevi it was a comparatively easy task to assign correct or approximately correct meanings to the words, and to arrive at the sense of the short sentences that occur on the monuments. The first stage in the progress of decipherment was reached in 1845, when Professor Lassen of Bonn published a tentative but fairly correct translation of the whole of the inscriptions then accessible, belonging to the first or Persian column. This success was no doubt a matter of great interest to the philologist; but the inscriptions themselves were found to be almost wholly wanting in historical importance. They were nearly all taken from buildings at Persepolis or elsewhere, and they simply commemorated their erection by Darius or by Xerxes or by Artaxerxes Ochus. They are uniformly conceived in the same set form of words, from which at the most some deductions might be drawn as to the relations existing between the Persian and his god Ormuzd. Two of them indeed were varied by a list of the provinces included in the Empire. It is true the

inscription at Behistun was not included in this collection; but even it adds little of importance except with reference to the revolt of the Magian impostor. The publication of this inscription by Major Rawlinson, in 1846, marks the successful termination of the task of deciphering the first column, and a complete mastery over the Old Persian language had then been obtained.

It was correctly supposed that the other two columns contained translations of the same Persian text; and the knowledge now acquired of the latter could not but afford an invaluable key to unlock the difficulties of the others. The decipherment of the inscriptions in the second column was attended by even less interest than the first. The language was ascertained to be Scythic, but nothing was found written in it except what was already known from the Persian. It, however, gave rise to a very heated controversy as to who the people were by whom it was spoken, which for a time enlivened an otherwise extremely dull subject. The decipherment of the third column, however, at length led to very important consequences that amply compensated for all previous disappointments. It was clearly recognised that the writing closely resembled inscriptions found on bricks that had been picked up from time to time on the site of Babylon; and hence the third column received, even in the beginning of the inquiry, the distinctive name of the 'Babylonian Column.' Only very few specimens of these unilingual inscriptions in the Babylonian character were collected during the first half of the century, and no progress was made in their decipherment. Meanwhile, however,

the study of the third column proceeded with the help of the Persian key; and at length the energy of scholars was stimulated by the sudden discovery in Assyria of multitudes of unilingual inscriptions written in a very similar character to that of the Babylonian and the third column. M. Botta began his excavations at Khorsabad, in 1843, and Mr. Layard at Nineveh, in 1845–6, and from that period there was no lack of material. The walls, and even the floors, of the newly discovered palaces were covered with long inscriptions which were afterwards found to record the great achievements of their Royal founders. But of far greater interest and importance than these were the numerous inscribed tablets found in what was called the Library of Assurbanipal. The first stage in the progress of this branch of the subject was reached in 1852, when Major Rawlinson published a complete transliteration and translation of the third column of the Behistun inscription, followed soon afterwards by translations of a few of the unilingual inscriptions recently found. The mastery he had obtained of the language of the third column by means of the Persian key enabled him at length to dispense with its assistance, and to pass on to the unilingual inscriptions where he had no such guide. He found that the language belonged to the Semitic family, and it came as a surprise to the learned world of that day to learn that the polytheistic nations of the Euphrates Valley spoke a kindred language to the Hebrew, and belonged presumably to a kindred race. It was thus shown that the three languages of the Persian inscriptions were

representatives, of the Aryan, Turanian and Semitic families. The difficulty of the task that remained was still very great, for it was found that Babylonian and Assyrian were not exactly the same language, but differed from one another at least as much as two strongly marked dialects of the same speech. The decipherer also was greatly impeded by varieties in the method of writing. Two very different systems prevailed in each country, so that there were in fact four different methods of writing the signs to be mastered; and when we consider that the language is written by means of several hundred signs, it was no trifling matter to find that each might be multiplied by four.[1] For a long time, no doubt, the knowledge of Babylonian and Assyrian remained very imperfect, but the labours of many scholars, reaching over fifty years and working upon the extensive materials gradually accumulating, have cleared up most of the difficulties, and both are now almost as well understood as any other ancient language.

With so much work still in hand, it was extremely disheartening to learn from Major Rawlinson that he had descried yet another and totally different language in certain inscriptions sent to him from Southern Babylonia. The intelligence was confirmed shortly afterwards by the discovery in the Library of Assurbanipal of large numbers of tablets that served as phrase-books for the acquisition of this newly found language.

[1] Later Assyrian includes 570 different signs, but only 300 are in common use (*British Museum Guide*, edited by E. A. W. Budge, 1900, p. 41).

Farther investigation showed that it belonged to the Turanian family; and it has received the names of Akkadian and Sumerian. Some years later the cities of Southern Babylonia were more thoroughly explored, especially Tello, by M. de Sarzec, and the number of inscriptions in this language largely increased. They are found written in a linear or archaic character that evidently preceded the use of cuneiform. The conclusion was soon reached that this Turanian language was the original language of Southern Babylonia, and that the cuneiform writing developed from its ancient script. But still more surprising was the discovery that not merely the writing but the religion and literature of later times descended from this ancient source. An immense collection of tablets has been made from the various libraries of Babylonia and Assyria, upon which a large and varied literature is inscribed. It consists of epic poems, legends of creation, astronomical books, legal judgments and contracts. In the field of religion it comprises magical incantations, hymns and penitential psalms. But it was found that all the most important part of this literature was simply translated from the Sumerian, and that Assyrian literature proper is limited to the dry and monotonous records of the kings. It is not the least interesting result of these studies to have shown that the Turanian race lies at the back of the civilisation of Western Asia. From them the Semitic races of the valley of the two rivers derived their law, their religion, the legends of their faith, their heroic literature, their science and art, and all the chief elements of their culture. Scarcely less surprising was

the discovery of the immense antiquity of the Sumerian civilisation. The evidence derived from the cuneiform documents, combined with the results of the excavations carefully conducted at Nippur by Dr. Peters and others, have carried back the beginnings of Sumerian history to an almost incredible antiquity, sometimes estimated at B.C. 6000.[1] From the written documents now in our possession, we are able to reconstruct the records of Southern Babylonia from about B.C. 4000, and an entirely new page in the history of the human race has been opened. We can trace the beginnings of civilisation among the lagoons of the Persian Gulf, the rise of a great commerce with the Mediterranean, with Egypt, and possibly with India; the descent of the Semitic nomads into the rich cities created by the industry of the Turanian population; the foundation of a Babylonian Empire reaching across to the Mediterranean at a period still anterior to the reputed age of Abraham. We can note many incidents in the struggle for the possession of Syria in which Egypt for a time remained the victor. We assist at the foundation of the infant kingdom of Assyria some 2000 years after our records begin; all the events of its rise and fall are engraved on our imperishable books of stone, and many incidents in the writings of the Jews have received illustration. Finally, on the fall of Assyria we see the old Empire of Babylon recover from its partial eclipse and flourish for a time under the great Nebuchadnezzar. Then follow the rise of Persia and the extinction of the great

[1] The *British Museum Guide* goes so far as to mention B.C. 8000 as a probable date (p. 3).

Semitic Empires, events on which our cuneiform records have thrown new and important light. Considering that the existence of the old Babylonian Empire was previously entirely unknown; that our knowledge of the Assyrian Empire hitherto depended altogether on a few passages in the Hebrew Scriptures, and some absurd legends collected by Herodotus and Ctesias; that the very existence of a second Babylonian Empire seems to have entirely escaped the knowledge of the Greeks, we are in a position to estimate the gain to the range of our historical information. The inscriptions have also shown the origin of many myths popular in ancient times; and of legends that even still enter into current theology. They have exhibited the Semitic people in the new light of a polytheistic race, and they have illustrated the important position filled by the Turanians at the dawn of civilisation.

It was only natural that the accuracy of many of these results should have been somewhat strenuously contested. M. Renan, for example, could not be induced to believe in the polytheism of the Semitic race, though the images of their gods began to crowd the Louvre in bewildering numbers. M. Halévy disputed the very existence of the Sumerian race and language, and the controversy he excited has not even yet wholly died away. Others cannot reconcile themselves to the subordinate position of the Semite to the Turanian in laying the foundations of all modern culture, and they still endeavour to show that the two races were at least contemporary workers from the earliest times, and contributed equally to the great result. All this is perhaps

symptomatic only of a passing phase of irritation, for the evidence on the other side seems too overwhelming to be long withstood.[1]

It is because the trilingual inscriptions have rendered such important service that we have considered it worth while to recount the history of their discovery after they had lain forgotten for some two thousand years, and to explain the steps that were taken in the work of decipherment by the many scholars whose patient toil was ultimately rewarded with success.

[1] On this subject see Sir Henry Howorth, *English Historical Review*, April 1898; Weissbach (F. H.), *Zur Lösung der Sumerischen Frage*, 1897; and especially Mr. Pinches' 'Sumerian or Cryptography,' *J. R. A. S.* 1900.

TRILINGUAL CUNEIFORM INSCRIPTIONS

CHAPTER I

THE DISCOVERY OF ACHAEMENIAN RUINS AND INSCRIPTIONS—BARBARO TO LE BRUYN, A.D. 1472–1718

THE trilingual inscriptions of the Achaemenian Kings of Persia that have led to the decipherment of the whole cuneiform literature were found chiefly at Persepolis and Behistun; though a single line at Murgab and a short inscription at Hamadan, the ancient Ecbatana, also contributed to an important extent. Other inscriptions were observed at Van in Armenia; at Naksh-i-Rustam, a few miles from Persepolis; upon the site of the ancient Susa, and so far afield as Egypt. They are all monumental: chiselled upon the walls of buildings to record the name of the king who erected the edifice. They are written in three different methods of cuneiform writing, and reproduce the same text in three different languages.

The inscriptions at Persepolis were the first to attract attention. The ruins where they were found had excited curiosity long before their discovery by European travellers, and many legends had arisen to account for their origin. It was variously reported that they were the remains of a palace of Solomon, or of Cai Caius, a predecessor of Cyrus, or of the great national hero

Jamshid. The literary classes described them as the Takht-i-Cai Khusrau, or Throne of Cyrus; and later on as the Khaneh-i-Dara or Mansion of Darius. The early travellers, however, learned that the popular name for them was Chehel Minar, or Forty Minarets, from the lofty columns that form their chief architectural characteristic. But during the eighteenth century Jamshid triumphed over all his competitors, and since then they have been more generally known as the Takht-i-Jamshid, or Throne of Jamshid. The question of their origin was not indeed finally settled till the inscriptions were interpreted. Chardin, at the end of the seventeenth century, and Heeren, a hundred years later, still supported the claims of Jamshid. Although it no longer admits of doubt that the buildings were erected by Darius and Xerxes, there is even yet no complete unanimity as to their original design. The more common belief is that they were the actual palaces of the sovereign, and that one of the buildings was the scene of the conflagration ordered by Alexander. Their dimensions and construction offer considerable difficulties to the supposition that they were the actual residence of the great king, though they may have been adapted for official receptions and other ceremonial purposes.

They lie on the south-east slope of a hill overlooking the plain of Mervdasht about forty miles north of Shiraz. Many other remains belonging to the same period are found on both sides of the neighbouring river Polvar. Three miles further up are the ruins of the fortress city of Istakhr; and four miles across the river are the Tombs of Naksh-i-Rustam. Doubtless the great city of Persepolis included within its circuit the whole of these isolated ruins, though the name has become restricted to those that now specially engage

our attention. They rise upon a terrace partly hewn from the solid rock, partly constructed of massive blocks of stone. They now consist chiefly of the colossal jambs of doors and windows, the connecting walls having entirely disappeared. Their chief characteristics are the beautiful columns that formerly gave the place its name, and the profusion of bas-reliefs that ornament the stonework. The platform is of very irregular shape, and is encased by a magnificent wall varying in height from twenty to fifty feet. It is approached from the plain on the west side by (1) a Double Staircase sunk into the line of the wall and rising parallel to it. At the summit is (2) a Porch entered between two buttresses supported by colossal bulls; beyond are two other buttresses with winged, human-headed bulls looking in the opposite direction towards the east. In the centre of the edifice marked by these two entrances there were originally four columns designed to support the roof, of which two only are now standing. Turning to the right, towards the south, is (3) a Sculptured Staircase leading up to the Columnar Edifice. It differs from the one already mentioned by standing out considerably from the line of the terrace; indeed there are two projections, the first no less than two hundred and twelve feet in length; the second, which again projects from the centre of the first, is eight-six feet in length. At either end of each projection is a single flight of steps; and the whole front is seen to be completely covered with bas-reliefs. Beneath the landing stage of the central projection the wall is divided into three compartments. In the centre is a plain polished slab intended for an inscription, and on either side are armed guards. In the spandrils formed by the ascent of the steps is a favourite device representing a contest between a

lion and a bull. On the wall to right and left of the central stairs are three horizontal rows of bas-reliefs separated by an ornamental design of roses. They represent a procession of tributaries, leading animals or bearing gifts, about to ascend the central stairs. At either end is a polished slab occupying the whole height of the wall; but only the one to the west has been filled with an inscription. The Columnar Edifice (4), standing on the terrace above, is designed in the form of a Central Cluster and three colonnades—one in front and one on either side. The centre formed a square of thirty-six columns, and each of the colonnades consisted of two rows of six columns. The total number of columns should therefore be seventy-two, of which only thirteen now remain standing. They differ in height, and belong to two different orders. Those in the front colonnade and central group are lower than the others, and have a capital resembling the Ionic order, except that the volutes rise perpendicularly. In the colonnades a double bull or unicorn rests directly upon the shaft; and it has been generally assumed that similar animals were originally superimposed over the voluted capital to make the other columns of equal height. The edifice covered an area of three hundred and fifty feet from east to west, and two hundred and forty-six feet from north to south. Passing through the columns, and continuing in the same southerly direction, the ruins are reached that have yielded the largest number of inscriptions. First in order are the massive jambs belonging to the building now known as (5) the Palace of Darius; and beyond are the remains of three buildings lining the southern terrace. The one to the right is the scarcely discernible ruins of (6) the Palace of Ochus. In the centre rise the huge pilasters of the great (7) Palace of Xerxes; while beyond to the

left is a small ruin called (8) the South-eastern Edifice. Turning back towards the north, between these ruins and the hill are the ruins of (9) the Central Edifice, a building resembling the Porch at the summit of the entrance. Beyond, in a line with the Columnar Edifice are the huge remains of the (10) Hall of the Hundred Columns. On the hill overhanging the Platform are two rock tombs similar to those at Naksh-i-Rustam; and, above, some travellers have traced three distinct walls and towers that formed the defence of the palace and city.

The palaces stand upon an artificial terrace of their own raised above the level of the platform, and the stairs leading up to them have afforded an opportunity for the display of ornamentation in bas-relief. The Porch is invariably protected by colossal guards hewn out of the stone. Over the great door of the main entrances the king is depicted entering or leaving the building, with attendants bearing the royal parasol and fly-chaser. On the doors leading to the lateral chambers he may be seen in dignified conflict with wild animals; or, as in the Palace of Xerxes, these scenes are replaced by attendants bearing viands to the royal table. Some of the most elaborate designs are met in the Central Edifice and in the Hall of the Hundred Columns. In the latter the king appears seated in a chair of state raised above the heads of five rows of warriors; while at the opposite door his throne is similarly supported by three rows of figures representing subject nations. These bas-reliefs are surrounded by an exquisite fretted fringe of roses, diversified above by small figures of bulls and lions; and over the whole the winged figure of Ormuzd is seen to hover.

A large inscription occupies the outside wall of the southern terrace. It is in four tablets, known as the

H, I, K and L of Niebuhr. The I inscription enumerates the provinces of Darius: another contains the declaration that that Terrace or Fortress was built by Darius, and, 'before him there was not any fortress in that place.'[1] Above the animals in the Porch is an inscription of Xerxes in three tablets, declaring that it was erected by him, and that it was one of the many beautiful works accomplished by him and his father Darius 'in Parsa' (Inscription D). The unilingual inscription on the sculptured staircase informs us that it also was constructed by Xerxes (Inscription A). As we ascend the south stairs to the Palace of Darius, we observe on the façade below the landing stage three tablets of inscriptions which are repeated upon the landing, on the anta in the south-west corner. It is again Xerxes who speaks, but he tells us that it was Darius who erected that palace (Inscriptions C and C[a]). Passing through the great doors we observe above the king and his attendants three tablets of inscriptions. They are in the three languages and run: 'Darius, the great king, king of kings, king of nations, son of Hystaspes, the Achaemenian, has built this palace' (Inscription B). Within, round the doors and windows is a single-line inscription written on the top in Persian, ascending on the left in Susian and descending on the right hand in Babylonian (Inscription L). On the west side of this palace is a second staircase, added later, of Artaxerxes Ochus, as we learn from a magnificent inscription on the façade (Inscription P). This inscription is repeated on the stairs leading to the palace of that king.[2] Adjoining the latter is the Palace of Xerxes, approached

[1] *Die Achämenideninschriften Zweiter Art.*, by F. H. Weisbach, 1890, p. 77. Inscription H.

[2] A much defaced inscription at the corner is conjectured from the position of the name Xerxes to have been set up by his son Artaxerxes

by two principal staircases, one to the east and the other to the west. On both occur inscriptions declaring Xerxes the builder in words repeated upon the wall above and upon the anta of the great Portico (Inscription E). Entering by the great doors we see a short inscription over the king and his attendants, which is repeated over the side doors and windows and even upon the royal robe (Inscription G).

These inscriptions, as we have said, do little more than record the name of the founders, and with the exception of the I inscription, they give no other information. But they are sometimes accompanied by a religious formula consisting of two paragraphs, of which occasionally the second only is given. It runs:

1. 'A great god is Auramazda who has created this heaven, who has created this earth, who has created men, who has created happiness for men, who has made Darius [or Xerxes] King, the only King among many, the only ruler of many.

2. 'I am Darius [or Xerxes] the great King, the King of Kings, the King of the lands of many races, King of this great earth far and near; son of Hystaspes [or Darius] the Achaemenian.'

The inscription at Hamadan contains nothing else.

The early travellers were attracted by Naksh-i-Rustam almost as early as by the Chehel Minar. It lies, as we have said, about four miles distant, across the Polvar, and no doubt it formed part of the great city. The bas-reliefs that excited the most curiosity belong to the Sassanian period and do not concern us here; but the tombs are Achaemenian. They are executed in the face of the rock and are four in number. They are

Longimanus: only the Semitic portion is partly legible, and it is the only trace of that king at Persepolis. Carl Bezold: *Die Achämeniden-inschriften*, 1882, pp. 47

comprised within a space of two hundred yards, and in exterior design they are precisely alike. They are in the shape of a Greek cross, and the transverse section reproduces in half relief the façade of a palace. In the topmost section there rests a rectangular stage ornamented with two rows of human figures, each containing fourteen persons in different costumes, designed to represent the various satrapies of the Empire. Upon it the king is seen standing on a dais; before him is an altar upon which the sacred fire is burning, and above floats the image of Ormuzd. The second tomb from the east is the only one that bears an inscription, and from it we learn that it was the resting place of the great Darius. The façade has four tablets of inscriptions, two in Persian and one each in the Susian and Babylonian languages. The Persian text inscribed in the upper limb of the cross is the best preserved and the most difficult of access. It consists of sixty lines and contains a second and later list of the provinces of the Empire (Inscription NR). Beneath it, between the half columns in the transverse section, is another Persian inscription, originally of about the same length, but so mutilated that only fifteen lines have been partly copied (Inscription NR [b]). The names of three of the great officers of the Crown have also been recovered (Inscriptions NR [c], [d], [e]), and quite recently the names of seven supporters of the throne have been added.

Ascending the valley of the Polvar, at a distance of forty miles to the north of Persepolis the traveller reaches another large group of Achaemenian ruins, which it is now generally admitted represent Pasargadae, the city of Cyrus. The early travellers were attracted by a curious edifice standing among them which they were told was the Tomb of the Mother of Solomon; but it was not till the nineteenth century that its

similarity to the tomb of Cyrus, described by Arrian, struck the imaginative Morier, the author of 'Hajji Baba.' At the same time a single line inscription was found repeated on several pillars with the legend: 'I am Cyrus, the King, the Achaemenian' (Inscription M).

The discovery of the Achaemenian ruins and inscriptions, to which we have briefly called attention, dates from the beginning of the seventeenth century. Till then Persia was almost entirely unknown to European travellers, and only a few scattered notices of the Persepolitan ruins come to us earlier. The first of these dates back to the end of the fifteenth century, and is due to a Venetian ambassador, Giosafat Barbaro, who visited the country in 1472. The account of his mission was not, however, published till 1545. He tells us that a day's journey from Camara he came to a great bridge across the 'Bindamyr,' which he heard had been built by Solomon.[1] Not far distant he perceived a hill where on a level spot, stood forty columns, called from that circumstance 'Cilminar.' Some of them are in ruins, but from what remains it is evident the building was formerly very beautiful. Above the terrace there rises a rock on which human figures of gigantic size are sculptured, and over them appears a figure which resembles 'God the Father in a circle.'[2] Elsewhere he observed a tall figure on horseback who he was told was Samson, and others clothed after the French fashion. 'Two days distant from this place is a place called Thimar, and another two days farther we come to a village where there is a sepulchre, in

[1] *Viagi fatti da Vinetia alla Tana* (Vinegia, 1545), p. 46.

Camara is no doubt the same place as the Comerum of Friar Odoricus, 1325 A. D. Cf. Curzon (Hon. G. N.), *Persia*, 1892, ii. 130. It must have been about ten miles from Persepolis, which Barbaro seems to regard as about a day's journey.

[2] '*Dio Padre in uno tondo*,' p. 46.

which they say the mother of Solomon is buried. Upon it is a kind of chapel on which are engraven Arabic characters denoting "Mother of Solomon." This place they call Messeth Sulcimen, or Temple of Solomon. The door looks towards the east.' Such is the earliest account in modern times of the famous ruins of Persepolis and Pasargadae, although Barbaro was quite unaware of their identity. It will be observed that he also visited Naksh-i-Rustam, and saw in the Sassanian bas-relief of Rustam the figure of Samson. It is possible that the notes of his journey were fuller than the published account, and they may have fallen into the hands of Sebastiano Serlio, a Bolognese architect. A few years before the appearance of the 'Viagi,' Serlio published his celebrated treatise on Architecture, which enjoyed extraordinary popularity, and was translated into many languages.[1] In it he gives a drawing of the façade of an edifice which he had heard was supported by a hundred columns. He had never seen it or its ruins, and seems to have had no idea where the building had stood, though he apparently gives us to understand that it was Grecian. The drawing shows a building with ten columns in front, adorned with Corinthian capitals, and supporting a second story of four columns and architrave. He had heard that only a few of the columns remained above ground, but he decided to present his readers with his conception of what it must have resembled. He ventures so far as to give the dimensions of the columns, although he anticipates that the whole thing will be flouted as a chimera or a dream. He thus gives us the first of a long series of conjectural 'restorations,' with which successive generations of architects have enlivened their

[1] *De le Antiquità*, Venetia, 1540. Cf. the edition in the British Museum, *Il Terzo Libro di Sebastiano Serlio*, Venetia, 1534, p. 100.

books and obscured the subject in hand. He is certain that some such building with a hundred columns had existed somewhere, but it never seems to have entered his mind that he had to go so far afield as Persia to find it. Whether the idea was suggested by what he had heard from Barbaro we cannot say; but it is a complete error to suppose that he represented his drawing as 'the plan and elevation of Persepolis.'[1] The first to suggest the identity was Don Garcia, who, however, does not appear to have read what Serlio had to say on the subject.[2] He thought Serlio had called his drawing the 'Forty Alcorans' and omitted its size and proportion. Serlio, on the contrary, says nothing about forty columns, and he gives the proportions of his imaginary edifice, which he leaves us to infer was one of the marvels of Greece.

It was not till the Portuguese found their way round the Cape of Good Hope that communication with Persia became regular and frequent. In 1508, Alboquerque conquered the island of Ormuz at the entrance to the Persian Gulf. Even at that time this barren rock was the resort of merchants from India; and under Portuguese rule it rapidly rose to great prosperity. Its king was permitted to retain his rank and a nominal authority, but his dominions, which included the islands of Kesem and Bahrein and the port of Gombrun on the mainland passed under Portuguese influence. In the division of the East among the religious orders, Persia fell to the Augustinians, to be the special field of their missionary labours. They erected a church and convent at Ormuz, which continued for a hundred years to be a centre of their activity. In the reign of Don Sebastian the Father

[1] See Menant, *Les Achéménides* (Paris 1872), p. 33, where, however, the reader will find a copy of Serlio's drawing.

[2] Don Garcia: *L'Ambassade* (Paris, 1667), p. 163.

Symon de Morales became its prior and applied himself to the acquisition of the Persian language. Soon after the union of the Portuguese and Spanish thrones, Philip II. instructed the Viceroy of the Indies to send an envoy to the King of Persia in order to settle the details of the commercial intercourse which had arisen between the two countries, and no one was better qualified to undertake the task than Morales, upon whom the selection fell (1583). The route from Ormuz to Ispahan, then the capital of Persia, passed within a short distance of Persepolis; and it is to the long succession of envoys who travelled that way that we are in great measure indebted for our knowledge of these ruins and the mysterious characters engraven upon their walls.

The missions took place chiefly in the reign of Shah Abbas (1587–1628), a monarch whose alliance against the Turk was eagerly sought for by the European powers. He had not only distinguished himself in the early part of his reign by considerable military capacity, but had evinced a strong desire to develop the commercial resources of his country. Indeed, he was as much of a merchant as a soldier. He was the chief, if not the sole, owner of the silk industry, and he sought to attract the merchants of all nations by permitting the freest competition among them. He did everything in his power to render the country agreeable to strangers. He erected sumptuous caravansaries for their accommodation upon the road. He made travelling even in remote districts absolutely safe, by the slaughter, it was said, of twenty thousand robbers. He received men of all nationalities and of the most diverse creeds with equal hospitality. He even sought to attract skilled artisans from Europe to instruct his subjects, and he caused his palaces to be decorated by foreign artists. The period of his reign was peculiarly favourable for the execution

of his liberal projects. The Portuguese trade was carried on with great success from Ormuz. About 1595 the Dutch made their first appearance in the Indian Seas, and gave a great stimulus to competition. Nor were the English merchants indifferent to the opening of a new market. So far back as 1561 Antonie Jenkinson visited Persia with that object, but he was not favourably received. In the first year of the seventeenth century, John Mildenhall, accompanied by John Cartwright, a student of Magdalen, renewed the overtures, and they found Shah Abbas even then well disposed to cede a port on the Gulf. In 1609, Joseph Salbancke again reported favourably of the commercial prospects if an English fleet could contend successfully against the Portuguese and Dutch. At length the East India Company, which was founded in 1600, succeeded in opening the trade in 1614, and from that year a British Resident was regularly established at Ispahan. It thus happened that both political events and commercial enterprise concurred at the same time to bring Persia into communication with Europe, and a country that only a few years before was scarcely known became the frequent resort of travellers.

In 1601, Philip II. thought it advisable to renew diplomatic intercourse with this great monarch, and he instructed the Viceroy at Goa to despatch a second mission to Ispahan. The Viceroy chose three Augustinian friars, among whom was Antoine de Gouvea, who has left an interesting account of his travels. Gouvea was the Rector of the College of Goa, and Professor of Theology, and he had acquired a competent knowledge of Persian. The party landed at Ormuz early in 1602, and set out in May to join the king, but they turned aside from the direct route to visit 'Chelminira,' or the Forty Columns, which he believed to be the 'sepulchre of an

old king who was buried here.'[1] He found, however, that the tomb was on the side of the mountain, and was generally attributed to Cyrus. He thought it was more probably to be assigned to Assuerus or Artaxerxes, and the tomb close by to his wife, Queen Vasti. The ruins of the Forty Columns were locally known as 'the Old Town,' and it was thought that it had been the original site of Shiraz. Old writers confirmed this view, because thay said the river Bondamiro[2] (which passes near the ruins) 'washed the walls of Shiraz.' Gouvea, following the geographical writers of the time, had no doubt that Shiraz was the ancient Persepolis. It never occurred to him to connect it with 'the old town' of Chelminar, to which tradition pointed as the original site of Shiraz. He called attention to the magnificent staircase that leads from the plain to the platform on which the ruins stand. Two staircases, he says, rise from the foot of the mountain, *vis-à-vis* one to the other, consisting of numerous steps well adjusted, and cut out of immense blocks of stone. The two stairs converge to one common landing place; and, writing evidently from memory, he adds that the sides are adorned with figures in relief, so well made that 'he doubts if it were possible to execute them better.' The Porch is, he says, adorned with 'figures of savage animals cut out of a single block, and so lifelike that they appear as though they desired to excite fear.' He describes the columns as surmounted by beautiful statues. On the Portico and in various places among the ruins he saw the portrait of the king. He does not mention any of the ruins on the platform;

[1] *Relation des Grandes Guerres*, par le P. Fr. Anthoine de Gouvea (Rouen, 1646), p. 78. The original was written at Goa, in 1609, and published at Lisbon, 1611: *Relaçam em que se trata das Guerras, etc.* (Lisboa).

[2] So spelt in the Portuguese edition, p. 30; 'Bandimico' in the French edition, p. 79.

they appear all to come under the comprehensive description of 'chapels,' which he says were built of huge blocks of stone. But he noticed the two tombs on the hill, one being 'the sepulchre of the king, which is not very different from the other.' He confuses the great entrance stairs leading to the Porch with the sculptured stairs leading to the Court of the Columns; and represents it as approached directly through the Porch. It was a long time before this error was cleared up. Gouvea called attention to the inscriptions. 'The writing,' he says, 'may be clearly seen in many places, and it may explain by whom the building was erected and the purpose it was intended to serve; but there is no one who can understand it, because the characters are neither Persian, Arabic, Armenian, nor Hebrew, the languages now in use in the district; so that everything contributes to obliterate the knowledge of that which the ambitious prince desired to render eternal.'

When Gouvea arrived at the Court, which was then at Machad, the capital of Khorassan (or Bactria), he was met by Robert Sherley, an Englishman, who was then not more than twenty years of age. Sherley, we hear, was naturally of good disposition, though infected by the pestiferous errors he had imbibed in England.[1] He was no match in argument for the Professor of Theology, and after some discussion 'he was converted and submitted to the Roman Church with seven or eight of his suite.' Gouvea, as was natural, attributed great importance to these conversions, and although he publicly declared that the primary object of his mission was to kindle a war with the Turk, he lost no opportunity of assuring the king that his heart was set much more on 'teaching the knowledge of the true God.' He presented his Majesty with a 'Life of Our Lord,'

[1] Gouvea, *Relation des Grandes Guerres*, p. 107.

richly bound, and certain religious pictures sent by the Archbishop of Goa; and he continued, in season and out of season, to press the faith upon his acceptance. The Shah, who was surrounded by Christians both in the harem and the Court, treated these importunities with toleration, and his courtesy encouraged the zealous priest to hope that he might number him among his converts.[1] A Persian merchant, who noticed with surprise the civility of the king towards Christians, had already circulated a report in Italy of his approaching admission into the Church, and Gouvea was surprised to meet at Ispahan with an embassy of Carmelite fathers sent by Clement VIII., with instructions to arrange the details attending the conversion of the country. These extravagances prejudiced the position of the Portuguese fathers, and they found that the Shah was beginning to grow weary of the whole affair. He, however, granted them leave to turn a large disused palace into a monastery, and to build a church.

Gouvea quitted Ispahan in company with a Persian envoy bound for Spain, who was the bearer of a letter from the Shah to Philip. The two other fathers remained behind to supervise the interests of their community. While Gouvea was still on his way to the coast, he received the pleasing news that war between Turkey and Persia had actually broken out.

The war was carried on by Rudolph in Europe and Abbas in Asia, till 1607, when the Emperor concluded the Peace of Sitvatorok, without consulting the convenience of his ally. The Shah was extremely displeased by an act that, without any warning, left him to bear the whole brunt of the campaign. It was while he was still suffering from the unfaithfulness of his European allies that Gouvea appeared for the

[1] *Op. cit.* pp. 134, 174.

second time at his Court. He left Goa in February 1608, and arrived at Ispahan in June; but it was with difficulty he could obtain an interview with the Shah. On his return to Portugal he was raised to the bishopric of Cyrene. He wrote his book in 1609, before he left Goa, and he evidently brought it with him to Lisbon, where it was published in 1611.

At the Spanish Court he had an opportunity of meeting Don Garcia de Silva Figueroa, who was subsequently to visit Persia as Ambassador, and to interest him in the ruins of Chehel Minar. In view of his projected journey, Don Garcia made a special study of the antiquities of the country in the original authorities, and in such modern books as were then available. He was a Castilian of high rank, and about fifty-seven years of age at the time he left on his mission, in 1614. He had an extremely difficult part to play, and one little suited to his haughty and irascible temper. The Portuguese authorities were greatly incensed at the appointment of a Spaniard, and they threw every obstacle in his way. The Viceroy detained him at Goa on one pretext or another from November 1614 to March 1617, when at length the Ambassador hazarded the voyage to Ormuz in a small vessel of two hundred tons.[1] On his arrival he found the Portuguese governor of the island nearly as intractable as the Viceroy, and it was not till October that he was able to continue his journey. He passed that winter at Shiraz, which he said was certainly the Cyropolis of the ancients and the place of burial of Cyrus, its founder. He found his sojourn intolerably dull: he complains

[1] *Ambassade de Don Garcia de Silva Figueroa en Perse*, traduit par de Wicqfort (Paris, 1667), p. 5. The Spanish original does not appear in the Catalogue of the British Museum, where, however, may be found the tract *De Rebus Persarum*, Antwerp, 1620.

that there was 'not as much as any bookes except a few pamphlets intreating of Holy Confession, and Navarr's Summes which the monkes of St. Augustine use.' In April 1618, he set out for Ispahan, and reached the bridge across the 'Bradamir,' which river he had no doubt was the ancient Araxes. A league further on he came to the ruins of 'Chelminara,' of which he had heard so much from Gouvea. He did not hesitate to identify them at once with 'those huge wilde buildings of the castle and Palace of Persepolis'; and he appears to have been the first to make this identification.[1] Gouvea, as we have seen, had no doubt that Shiraz was built on the site of Persepolis. Cartwright, to whose journey we have already alluded, was so convinced of the same that he heads a chapter 'Description of Sieras, ancient Persepolis,' and adds: 'This is the city Alexander burnt at the request of a drunken strumpet, himself being the first president in that wofull misery.'[2]

Don Garcia is warm in his praise of 'this rare yea and onely monument of the world (which farre exceedeth all the rest of the world's miracles that we have seen or heard off).' He found only twenty of the pillars left standing, but there were broken remains of many others close by; and half a league distant in the plain he noted another, and still farther off two short ones. He mentions the numerous bas-reliefs that 'doe seele the front, the sides and the statlier parts of this building.' The human figures are 'deckt with a very comely clothing and clad in the same fashion which the Venetian magnificoes goe in: that is gownes down to the heeles with wide sleeves, with round flat caps, their hair spred to the shoulders and notable long beards.'

[1] See the letter of Don Garcia in *Purchas, His Pilgrimes*, ii. 1534.

[2] '*The Preacher's Travels*, penned by J. C., sometime student in Magdalen Colledge in Oxford,' London, 1611, p. 84.

Some are seated in 'loftier chayres' with a 'little footstoole neatly made about a hand high.' He was particularly struck by the 'hardnesse and durablenesse of these Marbles and Jaspers so curiously wrought and polished that yee may see your face in them as in a glasse.' He was embarrassed to define the style of architecture, 'whether Corinthian, Ionick, Dorick, or mixt.' He called especial attention to 'one notable inscription cut in a Jasper Table, with characters still so fresh and faire that one would wonder how it could scape so many ages without touch of the least blemish. The letters themselves are neither Chaldaean, nor Hebrew, nor Greeke nor Arabike, nor of any other nation which was ever found of old or at this day to be extant. They are all three-cornered, but somewhat long, of the form of a Pyramide, or such a little obeliske as I have set in the margin (▵), so that in nothing doe they differ from one another but in their placing and situation.' He notes that the three-fold circle of walls said to have surrounded the castle 'hath yielded to the time and weather.' He mentions also the Tombs. 'There stand,' he says, 'the sepulchres of their Kings placed on the side of that hill at the foote whereof the Castle itself is built.' He did not himself visit Naksh-i-Rustam, but apparently his servants went, and 'did see some horses of marble, large like a Colossus and some men also of giantly stature.' This description is taken from a letter written by Don Garcia from Ispahan in 1619 to a friend at Venice. It was published at Antwerp in the following year, and appeared in English in 1625, in Purchas' Pilgrims. A more detailed account is found in the 'Embassy of Don Garcia,' a work elaborated from his notes or memoirs by a member of his suite, and translated into French in 1667. It contains a very full, and on the

whole accurate, description of the ruins. He noticed the irregular slope of the terrace, which he attributed to the exigencies of defence. The double staircase leading to the platform is so constructed that 'one can easily ride up on horseback.' On reaching the summit he noticed the Porch, the walls of which, he said, are supported by two great horses in white marble, larger than elephants, each with two wings, and with eyes expressive of the dignity of the lion. Beyond is another door adorned in the same manner, and exactly between the two stands a large column on its pedestal.[1] The Porch leads to the Columnar Edifice, where he saw twenty-seven columns still standing (not, as Purchas says, twenty), but there had evidently originally been forty-eight arranged in six rows of eight each.

He observed that they belonged to two different orders: the one resembled the column in the Porch; the others, he says, have no capitals except that upon one he perceived the half of a horse without its head. Singularly enough he falls into the same error as Gouvea, an error reproduced in some of the earlier engravings of the ruins; and represents the columns as standing upon the same level as the Porch. According to our author, therefore, on leaving the Columnar Edifice he came to a 'very beautiful stair, which though not so large nor so high as the first, is incomparably more beautiful and magnificent, having on the walls and balustrade a triumph or procession of men curiously clothed, carrying flags and banners and offerings. At one extremity of the procession we see a chariot drawn by horses, in which there is an altar from whence a flame of fire is seen to rise. At the other are combats of animals, among which he observed

[1] He only mentions one (p. 146). He does not seem to have noticed any difference in the animals in the farther Portico.

a lion tearing a bull, so well represented that art can add nothing to its perfection : it is impossible indeed to discover the slightest defect.' Having ascended the stairs, he reached a court on which he observed a ruined building, consisting of several parts, each part about sixty feet long by twelve feet wide. This is the first distinct mention of what is now known as the Palace of Darius. The walls are six or seven feet thick and twenty-four feet high, and are so profusely adorned with figures in relief that it would require several days to examine them adequately, and several months to describe them in detail. The one that struck him most was the representation of a 'venerable personage,' sometimes seated 'on an elevated bench,' sometimes walking, accompanied by two attendants holding a parasol and a fly-chaser over his head. He was greatly impressed by the 'perfection and vivacity' of the figures; and 'especially by the drapery and dress of the men.' They are cut in 'white marble and incorporated in the black stone,' the latter being of such exquisite polish that it reflects as clearly as a mirror—so much so indeed that the Ambassador's dog, Roldan, shrank back in terror from the reflection of his own ferocity. This perfection of polish is the more remarkable, considering the great antiquity of the work, which must date from the monarchy of Assyria, or even earlier. He noted the strange peculiarity that among the immense number of figures there was not a single representation of a woman. He observed inscriptions in some places, but 'the characters,' he said, 'are wholly unknown, and are no doubt more ancient than those of the Hebrews, Chaldeans and Arabians, with which they have no relation; and their resemblance to those of the Greeks and Latins is still less.' The ruins of the Palace of Xerxes seem to have escaped his

notice; but he visited the Hall of the Hundred Columns. It covers, he says, a square of a hundred paces, the ground in the centre being thickly strewn with fallen columns. It looks more like an accumulation of several ruins than the remains of a single edifice. Here also were bas-reliefs upon the walls, larger than life and representing 'furious combats with terrible and ferocious animals; some resembling winged lions and others serpents.'

He noticed the two famous sepulchres on the side of the mountain overhanging the ruins, above the space enclosed by the walls of the terrace. He observed that they were formed by a wall of black marble thirty feet square, covered with figures in white marble. On the top appears a man of authority, possibly a king or prince, seated on a throne, with several figures standing round him. Before him is an altar with fire burning upon it. Near it is a coffer cut into the rock, which seems to have been the sepulchre. It is seven or eight feet long by three feet wide. The tombs are separated forty to fifty paces from each other but are of similar design. It might, he thought, be at first supposed, as Gouvea seems to have imagined, that the splendid ruins below were intended only as an 'ornament' for the tomb of the Great King: but further reflection convinced the writer that they were none other than the Palace and Citadel of the Persepolis described by ancient authors; and indeed there is distinct evidence of the conflagration due to the impetuosity of Alexander.

Till Don Garcia made the elaborate notes from which the writer of the foregoing account derived his information, 'nothing assured' was known in Europe concerning these remarkable remains. Sebastian Serlio, we are told in his work on Architecture, only knew of them from 'an uncertain and barbarous relation,' and he has

given us merely a rough drawing of the edifice, showing forty small columns with Corinthian capitals.[1] Don Garcia even complains that Gouvea could only give him a 'confused' account. Don Garcia brought an artist with him, and he took the best means of dissipating the obscurity in which the subject was hitherto involved by having drawings made upon the spot. The artist said he intended to copy the triumphal procession on the stairs, but he probably found the time at his disposal insufficient for this labour, for he afterwards says he actually accomplished the drawing of four of the figures, upon one of which were 'the characters composed of little triangles in the form of a pyramid.' But of greater importance than these was the copy Don Garcia ordered to be taken of 'a whole line of the large inscription which is on the staircase in the centre of the triumphal procession. It is to be found on a highly polished table, four feet in height, in which the letters are deeply cut.' We are unable to say whether these drawings appeared in the original Spanish edition, but they have not been reproduced in the French translation.

Don Garcia finally reached Ispahan in 1618, where he was detained till August in the following year. His mission turned out a complete failure. One of its principal objects was to secure a monopoly of the Persian trade for Spain. Just as he reached Goa he heard that the Governor of Lara had taken Gombrun from the Portuguese. While he was in Persia, he had the mortification to find that port regularly used every year by the English to land their goods. In 1618, peace was concluded between Persia and Turkey, and the Shah was thus rendered independent of the Spanish alliance, while

[1] '*Brute et grossière estampe*': *Ambassade*, p. 163. We have already said that this statement is incorrect. *Supra*, p. 11.

he was daily becoming more disposed to rely upon the English merchant fleet in the event of an open rupture with the Portuguese of Ormuz. He had always consistently opposed the concession of a monopoly to any one nation, and he now found himself sufficiently powerful to reject the demands of Spain. The discomfited Ambassador left in August 1619, and spent the winter at Ormuz in the hope of a favourable change in the aspect of affairs: and he finally reached Spain in 1622, after an adventurous voyage.

During his residence in the Persian capital, he made the acquaintance of Pietro della Valle, a Roman gentleman of considerable fortune, who had been travelling for some years in the East. In consequence of a disappointment in love he had sought relief in foreign adventure, and at the age of twenty-nine he embarked at Venice for Constantinople. After visiting Egypt and the Holy Land, he crossed the desert to Bagdad. At that time Bagdad was commonly supposed to be built on the site of the ancient city of Babylon. But Della Valle had no difficulty in pointing out that this was evidently an error, for we know that the one city was built on the Tigris, while the other stood on the Euphrates. He made several excursions through Mesopotamia, and visited the mounds near Hillah, which he had no doubt covered the ruins of the true Babylon. He has left an account of the state in which he found them, which may still be read with interest; and he picked up some of the bricks, both baked and unbaked, of which they are composed.[1] These he subsequently brought back with him to Rome, where they were included in his private collection of antiquities. They were perhaps the first specimens that ever reached Europe, and a few of them may still be seen in the

[1] *Viaggi di Pietro della Valle* (Brighton, 1843), i. 382.

Museo Kircheriano. He indulged his antiquarian tastes by endeavouring to ascertain the sites of some of the famous cities of antiquity, and he seems to have been the first to identify that of Ctesiphon correctly. At Bagdad he married a Mesopotamian lady, and afterwards crossed the mountains of Kurdistan into Persia. He was cordially welcomed to the Court by Shah Abbas, who enrolled him among the privileged number of 'Guests of the King.'

In the autumn of 1621, after a sojourn of nearly five years, Della Valle thought it expedient for many reasons to turn his steps homewards. He had fallen into very bad health, and it was clear that he had ceased to be cordially received at Court, although he professes to have left without having forfeited its favour.[1] Accordingly on October 1, he quitted Ispahan without any formal leave-taking, and followed the usual road to the coast. After several days' journey he came to the Puli Neu, or New Bridge over the 'Kur,' no doubt the 'Cyrus' of the ancients, and probably also identical with the Araxes, a word that simply means 'river.' He followed its course till he came to a small rivulet called the Polvar, which at first he thought must correspond to the Medus of Strabo, an opinion he subsequently rejected on the ground that the stream was not of sufficient importance. Having crossed it by a bridge, he at length reached Chehel Minar, and pitched his tents close to the ruins.[2] The 'Geographical Epitome' of Ferrari, which Della Valle carried with him, represented Shiraz as the probable position of Persepolis, an opinion which Gouvea had not controverted. We have seen, however, that Don Garcia had no difficulty in identifying Chehel

[1] *Viaggi*, ii. 231.

[2] *Viaggi*, vol. ii. For his account of Persepolis see *Lettera xv.* pp. 228–68.

Minar with the ruins of the ancient Persian Palace. Della Valle had no doubt often discussed the matter with him during the winter of 1618, which they spent together at Ispahan, and he accepts the identification of the site of Persepolis without hesitation. He was, however, by no means convinced that the ruins upon the Terrace are the remains of the Palace. Without decisively rejecting that supposition, he was more inclined to believe that they were originally designed for a great temple. The scene on the sculptured staircase he regarded as a sacrificial procession; and the imposing figure beneath the umbrella might represent a high priest no less than a king. He could not discover any indications that the principal buildings had ever been roofed, which he considered a strong confirmation of the temple theory. He observed that the 'horses' on the Porch were human-headed with wings like griffins, and that their backs were apparently protected by iron harness. He thought the monsters on the other two piers were the same, only facing in the opposite direction. Between them he saw there had originally been four columns, two of which were still standing, and the others fallen to the ground. Turning to the right towards the south, he observed a large vase of marble, about twenty-four feet square, that had evidently been intended for ablutions; and passing farther on in the same direction he came to the sculptured staircase, which he now places for the first time in its correct position beneath the Columnar Edifice. We also learn that the figures on both sides are turned towards the central stairs, and present the appearance of a procession about to ascend the steps. He gives a detailed account of the bas-reliefs, and observes that the different groups are separated from each other by a design representing the cypress tree.

The various animals that figure in the procession lead him to think they were intended for sacrifice, and hence that the edifice had been probably a temple. He fixes the position of the inscriptions at the extreme end of the procession. He is much less enthusiastic in his praise than Don Garcia. He does not consider that the figures of men and animals, nor those of trees, are well designed; and he thinks the beauty of the work as a whole consists chiefly in its antiquity and in the magnificence of the marble of which it is composed. Don Garcia had counted twenty-seven columns, but at the time of Della Valle's visit, only three and a half years later, not more than twenty-five remained. As he approached from the north he observed the traces of two rows of columns stretching from east to west. Beyond them is a vacant space, about sufficient for two rows of columns; and then we come to a central group of six rows of columns arranged from north to south. On either side, to west and east of the central group, but separated from it by the distance already mentioned, there are double rows of columns, as on the north side He says nothing of any colonnade on the south, where in fact there is none. The columns are about twenty-six and a half feet apart, and some are higher than others, from which he inferred that the building was not roofed, and could not therefore have been the palace of a king. He could not find any trace of a staircase leading to an upper story.

Passing the columns and continuing in the same southerly direction, he observed two small chambers, one on the right hand, near the edge of the Terrace; the other on the left hand, towards the mountain. They are not really chambers, but open courts; nor are they surrounded by walls, but by the jambs of doors and windows. As in the Columnar Edifice, there are no

indications that the buildings were roofed, and on that account he believes they were parts of a temple where sacrifices were offered in the open air; he does not consider they were designed for a sepulchre. In addition to the 'venerable personage' already noted by Don Garcia, he remarked that men are depicted on the side doors struggling or fighting with lions. Behind this chamber, in a small open court, he saw two high pilasters with inscriptions at the top, but at such an elevation that he could not distinguish the characters. From this point we fail to follow him with equal certainty. He detected a group of columns forming a square of six in a ruin that evidently corresponds to the Palace of Xerxes; and he observed the remains of an aqueduct below. He alludes to another enclosure which may possibly be the Hall of the Hundred Columns, although he thought it could have been no part of the original design of the fabric.

He remarked the great inscription near the lion on the wall of the sculptured terrace below the Columnar Edifice. 'It occupies,' he says, 'the entire height of the wall from top to bottom. One cannot tell in what language or letters these inscriptions are written, because the characters are unknown. They are very large and are not united to one another, but divided and distinct, each by itself alone as in Hebrew: if indeed what I take for a letter only is not a complete word. I have copied five of them as best I could, and they are those that occur most frequently.'[1] The lines of the inscription are filled up 'so that I cannot tell whether they are to be read from right to left as in Oriental languages, or from left to right as with us.' He is, however, disposed to believe they are read from left to right, because when the 'pyramidical figure' is

[1] They are given on p. 253.

vertical the head is always uppermost, and when the figure slopes or is placed horizontally the head is to the left and the point inclined to the right. He remarked that the writing was composed entirely of the one pyramidical figure and of an angular character more slender than the other; and it was simply the number and disposition of these two forms that constituted the difference of the letter.

Don Garcia had no doubt that the ruins had been entirely devoted to the secular uses of a palace and citadel. We have seen that Della Valle, though he accepted their identification with Persepolis, could not readily believe that the large roofless buildings had ever been suited for a dwelling, and he therefore inclined to the theory that they were the remains of a temple.

From his tent at Chehel Minar he rode a league to the north to the base of the hills that surround the plain, in order to visit a monument called Naksh-i-Rustam—of which he is the first to give an account. He explains that Rustam is a celebrated Persian hero who lived about the time of Cyrus. Della Valle came to a large square space levelled in the side of the rock, on which various figures larger than life were cut in half relief. The subject represented two men on horseback, the one endeavouring to wrest from the other a ring which he held in his hand. A third person appears on horseback, holding the hand of a man by his side. Elsewhere he observed figures of women, and other subjects to which he could not assign a meaning. Near these sculptures he noticed remains that could only have been intended for sepulchres. Among these were two square pedestals with an aperture above to contain the ashes of the body. Elsewhere he observed on the side of the mountain several openings like windows.

possibly intended to admit a corpse. But the most remarkable discovery was a sculpture that could only be reached by ladders. It represented the front of a house; a door in the centre and several columns on each side, supporting an architrave—frieze and cornice. The front was ornamented with various figures which he could not accurately define on account of the height of the monument. But he thought he discerned a man leaning upon a bow and contemplating an altar. Above him, as if suspended in the air, was a figure which appeared to his companions to resemble the Devil. He thought this was probably Jamshid, who had reigned many years before Cyrus, and who is still remembered as a great enchanter, and possibly to be identified with Nebuchadnezzar. He had seen two somewhat similar sepulchres just over Chehel Minar (those noticed by Don Garcia), and one of these he had been able to enter. He found they were excavated from the rock, quadrilateral in shape, and about the height of a man; with three large hollow niches at the sides, which he somewhat fancifully imagined had been used as reservoirs for water. A long stone he observed on the floor appeared to cover the place of sepulture. He thought the city of Persepolis might have covered the whole plain between Chehel Minar and Naksh-i-Rustam.

Della Valle only passed two days among these ruins, and then continued his journey to Shiraz. His intention was to go to Ormuz and take a passage to Goa, from whence he could find his way back to Europe. As he approached the coast, however, he found his journey impeded from a very unexpected cause. The departure of Don Garcia from Ispahan, in the summer of 1619, had been followed by the interruption of the good relations between the Portuguese and the Persians. While the Ambassador was still detained at Ormuz

(1619–20) he had the mortification to witness the English merchant fleet arrive and calmly proceed to take the soundings of the harbour of Gombrun, which, since its annexation to Persia, had acquired the new name of Bunder Abbas, or Port of Abbas. In the spring (1620), hostilities broke out between Persia and the Arabs of the opposite coast, who were friendly to the Portuguese. With a view to reprisals the latter threw the Persian merchants at Ormuz into prison. As the year advanced, the Portuguese fleet arrived with positive orders to recover Gombrun and the island of Bahrein, and also to build a fort at Kesem to secure the water supply. The friction that existed between the Portuguese and Spanish authorities delayed the immediate execution of these instructions, and meanwhile the annual English fleet had time to arrive An engagement at once followed, and the Portuguese were forced to withdraw (January 1621). When the English vessels left the Gulf with their cargo the Portuguese returned, and speedily began hostilities by landing a force on the island of Kesem and beginning the erection of a fort (June 1621). In the autumn they destroyed the Port of the Two Headlands on the mainland, and the Persian army immediately occupied the whole coast line and cut off communications with Ormuz (October). This event occurred just at the time Della Valle was on his journey to Bunder Abbas. He approached sufficiently near to hear the roar of cannon from Ormuz, and after making some useless attempts to cross to the island, he retired to Mina, where, under the protection of the English merchants, he waited the course of events (October 1621). The town was very unhealthy. His wife died, and he himself was reduced to the point of death. As soon as the English fleet arrived the Persians with their assistance commenced hostilities in earnest.

Kesem was occupied and the new fort destroyed. Ormuz itself was attacked, and fell after an heroic resistance (April 1622). The Portuguese held the port of Jask on the mainland till the following year (1623), when it was taken by the English to avenge the death of their commander Shilling, and handed over to the Persians. Thus the Portuguese were finally driven from the Persian Gulf, and their trade was transferred to the English and Dutch.[1] Della Valle returned to Shiraz to recruit his health, and it was not till January 1623 that he found a passage in an English vessel to Surat. He reached Rome in 1626, bringing with him the body of his wife, and a large collection of curiosities. He gave an account of his adventures in a series of letters to a friend at Naples: the one which contains his description of Persepolis is dated from Shiraz, October 21, 1621. On his return to Rome he made a collection of his scattered correspondence, but the first part did not appear till 1650, only two years before his death; the portion (Part III.) that contains the letter on Persepolis was first published in 1658. It included the five cuneiform letters he had copied on the spot, and although their publication was delayed for nearly forty years they still seem to have been the first to appear in Europe; for we are not aware that the drawings of Don Garcia ever saw the light.

Meanwhile Persepolis was visited by an English traveller, whose description long anticipated that of Della Valle. It will be recollected that Gouvea met a young Englishman, Robert Shirley, at Ispahan in 1602, and won him over to the Catholic faith. Shirley was subsequently employed by Shah Abbas as Envoy to the European Courts, and he resided for many years in Spain. The fall of Ormuz put an end to his mission in

[1] Herbert (Sir Thomas), *Travels*, 1665, pp. 111–17.

that country, and in 1623 we find him in England. He was a somewhat absurd person who adhered to Oriental costume, and went about in a red turban surmounted by a cross. A singular occurrence cast suspicion on the validity of his credentials as a Persian envoy. A native Persian arrived on the scene, who treated Shirley's pretensions with contempt, and gave himself out as the only true representative of the Shah. The documents that could alone settle the dispute were all written in Persian, and no independent person could then be found in the whole of England who was able to read a word of that language. The controversy grew warm, and the native Persian enforced his position by knocking his rival down. At length it was determined to send an English ambassador to Ispahan to clear up the matter, and Sir Dormer Cotton was selected. He was accompanied by Sir Thomas Herbert, who has left an account of his adventures. They sailed from Tilbury on Good Friday 1626 and reached Bunder Abbas in January 1627. He found the English in enjoyment of high favour in consequence of the assistance they had lately rendered in driving the Portuguese from the Gulf. They were 'privileged to wear their flags displayed at the top of their publick houses' or consulates, and there were many merchants, both English and Dutch, living in the town. Nor does it appear to have been a wholly undesirable residence. Herbert speaks in praise of the 'Buzaar,' the numerous coffee-houses, sherbet-shops, and other places of entertainment. Its prosperity had increased immensely since the fall of Ormuz, 'which of late was the glory of the East, but had now become the most disconsolate.'

The description Herbert gives of Persepolis in the first two editions of his Travels, which appeared in

1634 and 1638, is extremely meagre and imperfect.[1] He says it was built by 'Sosarinus, who lived in the Median dynasty, the third Emperor from Arbaces, who gave end to Sardanapalus.'[2] It flourished for two hundred and thirty years till destroyed by Alexander. He does not believe that Shiraz was ever a part of Persepolis, thirty miles distant, though the one may have risen out of the other. He remarks that the 'whole basis' or platform 'is cut by incredible toyle out of the solid marble rock twice the compasse of Wyndsor Castle.' It is approached by 'ninety-five easie staires, dissected from the durable black marble,' 'so broad that a dozen horsemen may ride up abreast together.' The total ascent, however, is not more than twenty-two feet, and at the summit is a gate 'engraven with a mightie elephant on one side and a Rhynoceros on the other.' These majestic figures are thirty feet high; and a little beyond are two other piers 'wherein is engraven a Pegasus.' Between them he noticed two columns, and was consequently more accurate than Don Garcia. 'Of like work, bulk and matter are two gallant Towers.' The gate leads to the famous Columns, of which only nineteen now remain standing, and one other below in the plain. 'Howbeit the ruines and ground of four score more are yet visible: this great roome was the Hall.' He at first estimated the height of the columns at 'fifteen foote,' but later (1638) he modified this to from fifteen to twenty cubits. And they 'rise beautifully in forty squares or concave parallels; every square has three full inches.' 'Adjoining

[1] *Some Yeares Travels*, by Sir Thomas Herbert, Bart. See the various editions published in 1634, 1638, 1665 and 1677. The first edition, *A Relation of some Years Travaille, begunne anno 1626, by T. H. Esquier*, London, 1634, has recently been practically withdrawn from the Museum Library in order to enjoy the honour of appearing within a glass case.

[2] Ed. 1634, p. 56.

is another square roome whose blacke marble wals are yet abiding.' It has eight doors 'exquisitely engraven with images of Lions, Tygres, Griffons and Buls of rare sculpture and perfection: a top of each door is the image of an Emperour in state with staffe and scepter.' Elsewhere he amplifies this account. 'In other places (for the wals are durable) Battailes, Hecatombs, triumphs, Olympick games, and the like, in very rare sculpture and proportion.' The country people gave different accounts as to whom this figure was intended to represent, and they variously proposed Jamsheat, Aaron, Sampson and Solomon, but they excluded Rustan. This room measured 'ninety paces from angle to angle, in circuit three hundred and sixty paces, beautified with eight dores,' and joining it were two smaller apartments, one seventy by sixty, the other thirty by twenty paces. He was told that the first was the Chamber of the Queen and the other the nursery. He was particularly struck by the appearance of the latter. 'The wals are,' he says, 'rarely engraven with images of huge stature, and have been illustrated with gold which in some places is visible, the stones in many parts so well polisht that they equal for brightnesse a steele mirrour.' He was at a loss to assign this wonderful building to any of the known styles of architecture: 'whether this Fabrick was Ionick Dorick or Corinthiack I cannot determine, but such to this day it is that a ready Lymmer in three moneths space can hardly (to do it well) depict out all her excellencies.'

He also noticed the tomb mentioned by Don Garcia. It lies, he says, 'somewhat further, over heaps of stones of valewable portraictures.' 'It is cut out of the perpendicular mountaine,' and represents 'the image of a King (which may be Cambyses) adoring three deities,

the fire, the sunne and a serpent.' He also mentions 'Nasci Rustam,' the monument of Rustam, situated, he says, five miles west of Persepolis.[1]

Herbert gives an engraving of the ruins, which is the first general view ever taken of Persepolis in modern times. It only occupies a portion of a small folio page, and it is scarcely possible to imagine any drawing more inaccurate and grotesque. We ascend to the platform by a series of about fourteen steps leaning straight up against it, at right angles to the line of the terrace. At the summit there is not a trace of the Porch, but we pass through a narrow opening with posts on either side. On the top of one of these appears an elephant with its proboscis stretched out in a menacing attitude. On the top of the other post we observe an unpleasant creature leaning forward, possibly intended for a tiger. When we have made our way through these inhospitable guardians and gained the platform, we find the whole of it on the left-hand side occupied by columns. Facing the entrance, at some distance from it, we see three doors and the high wall of a roofless building, and behind it a lofty and ragged mountain. Behind the columns on the left at a great elevation we observe a kneeling figure, worshipping a serpent coiling round a cross, and beyond, an altar on which fire is burning. To the right, on the same level, we observe a human-headed centipede. This misleading picture is reproduced evidently from the same plate in the second edition of 1638. It was not till the appearance of the second edition that he thought it worth while to notice the existence of the cuneiform letters. 'In part of this great roome,' he says, referring to the Palace of Darius '(not farre from the portall) in a mirrour of polisht marble wee noted above a dozen

[1] *Cf.* ed. 1634, p. 59.

lynes of strange characters, very faire and apparent to the eye, but so mysticall, so odly framed as no Hieroglyphick no other deep conceit can be more difficultly fancied, more adverse to the intellect. These consisting of figures, obelisk, triangular and pyramidall yet in such simmetry and order as cannot well be called barbarous. Some resemblance, I thought some words had of the Antick Greek shadowing out Ahashuerus Theos. And though it have small concordance with the Hebrew Greek and Latine letter, yet questionlesse to the Inventer it was well knowne and peradventure may conceale some excellent matter though to this day wrapt up in the dim leafes of envious obscuritie.'[1]

The letter of Don Garcia had appeared in Purchas the year before Herbert sailed for India, and it is obvious he had it before him when he wrote his own account. Indeed he refers to Don Garcia, though he does not acknowledge his own obligations to him. Don Garcia in his letter did not mention the sculptured stairs, one of the most remarkable features of the ruin; Herbert has likewise passed it over in silence. Don Garcia remarked that it was possible to ride up the stairs to the platform. Herbert adds that twelve horsemen might ride abreast; forty years later he recollected that he had actually witnessed this feat accomplished. Both writers express doubts in nearly the same language as to the style of the architecture; they both compare the cuneiform letters to 'pyramids' and 'obelisks,' and they both note their dissimilarity to Hebrew, Greek and Latin. Herbert had, however, the merit of giving the earliest published account of the Palace of Darius.[2] His description of the animals on the gate and his measurements are also wholly his own.

[1] Ed. 1638, p. 145.

[2] It will be recollected that Della Valle's letters were not published till 1658.

Having spent two days at Persepolis, he followed the mission to Asheraff, on the Caspian, where Shah Abbas was holding his Court. The result was extremely disappointing. The Shah indeed received Sir Dormer Cotton with his usual courtesy, and declared his continued friendship for Sir Robert Shirley. He acknowledged the services Shirley had rendered, and protested his willingness to punish his traducer, if that miscreant had not unfortunately escaped his vengeance by death. But the Shah was then an old man, and he appears to have fallen under the influence of a favourite Minister. This functionary interposed so successfully that the Ambassador could never obtain a second interview, and, after considerable delay, the courtier assured him that he had the royal authority to declare that the credentials of Sir Robert Shirley were fictitious. This startling communication was certainly false, and no doubt it originated with the Minister himself; but it was no less decisive of the matter. Overcome by disappointment, both Sir Dormer and Shirley fell ill and died shortly afterwards. Herbert continued his journey, and after visiting Babylon, returned to Surat, on his way home.

The account he gave of the ruins to his friends excited considerable interest, which was stimulated by the publication of two editions of his Travels. He often expressed his regret that adequate drawings were not made by a competent artist before the monument was irrevocably destroyed: 'The barbarous people every day defacing it and cleaving it asunder for grave stones and benches to sit upon.' The result of these representations was that Lord Arundel sent out a young artist for the express purpose, who unfortunately died before he reached his destination. It seems indeed that the ruins were for a time really exposed to considerable

danger. In consequence of the writings of Della Valle and Herbert, they were visited by so many foreigners of distinction that the Governors of Shiraz found their revenues seriously taxed by the obligations of hospitality. Several, it was said, were ruined, and at length one of the Governors made a deliberate attempt to destroy the cause of so much inconvenience. But the solidity of the structure offered serious obstacles to the execution of this design.

Meanwhile Persia was beginning to attract more general attention, and in 1637 it was visited by a German named Oelschloeger, more euphemistically styled Olearus. His 'Beschreibung' was first published at Schleswig in 1647, and a revised edition appeared in 1656.[1] It is a magnificent folio in black-letter, richly adorned with a profusion of excellent engravings and a number of maps. The book was translated into Dutch in 1651, into French in 1656, and into English in 1666. Olearus was born in Anhalt in the first year of the century, and entered the service of the Duke of Holstein-Gottorp. The Duke had recently founded the town of Friederichstadt, and he desired to open a trade with Persia by way of Russia. He accordingly sent a commission to Moscow and Persia to negotiate the business, and Olearus was attached to it as secretary.[2] They left Gottrop in October 1635, but it was not till the end of March 1636 that they even reached Moscow. They continued their journey in the end of May, and arrived at Ispahan in April of the following year (1637). Shah Abbas had died in 1629, but they were well received by his successsor, Shah Sefy, and the usual interchange of presents followed. One of the Ambassadors, a

[1] *Vermehrte neue Beschreibung der Muscowitischen und Persischen Reyse* (Schleszwig, 1656).

[2] *Estat de la Perse en 1660*, par le Père Raphaël (Du Mans, Paris, 1890), p. xliii.

merchant named Brugman, displayed very undiplomatic conduct, and the embassy failed in its purpose. It accomplished the return journey somewhat more rapidly, in about a year and a half (December 21, 1637, to August 1, 1639). Olearus did not visit Persepolis himself, but a member of the mission, the 'hochedel gebornen' Mandelslo, proceeded to India by the well-known route to Ormuz and passed the ruins. Olearus devoted himself to Persian studies, and translated 'Gulistan.' But his chief service is the excellent edition he published of the travels of Mandelslo, which he enriched by copious notes of his own taken from various sources.[1] We learn from this work that, on his way from Ispahan to the coast, in 1638, Mandelslo came to a large village called Meshid Maderre Soliman, which, he said, derived its name from a tomb half a mile distant. It was explained to him by the Carmelites of Shiraz that no doubt it was the resting place of the mother of the great Shah Solimans, though the popular opinion in the neighbourhood was that it was the tomb of Solomon himself. He gives an excellent description of the chapel of white marble resting upon successive tiers of square blocks of hewn stone; and adds that in his day there might still be seen within the chapel strange letters in unknown characters engraved upon the walls. These, however, were afterwards ascertained to be merely verses from the Koran, written in Arabic. He has given a drawing of it, which conveys a fair impression of its appearance, and is curious as the earliest known representation of the tomb of Cyrus. Continuing to the south, he reached Persepolis. He heard many fabulous accounts of its origin, some ascribing it to Tzemschied Padschach, others to Solomon, and some

[1] *Morgenländische Reyse-Beschreibung des Hochedel gebornen J. A. Mandelslo* (Schleszwig, 1658), pp. 10-17.

even to Darius; but his informants were clear that it had been destroyed by 'Iskander as they call Alexander.' The ascent is made by four stairs with ninety-five marble steps. On reaching the summit he found the remains of four walls, apparently designed for gates. On the two first were horses carved in stone, with curious head-stalls and saddles. On the other two the horses have lion heads and are adorned with crowns and wings. He also, like Herbert, entirely omits to mention the sculptured stairs, and passes direct from the gates to the describe the columns. He found nineteen standing, and eleven others partly ruined, but no doubt the original number was forty. He could not decide whether the building had been roofed. Passing on, a slight ascent brought him to two moderate-sized chambers, of which the door and window posts remained as well as the walls, the latter remarkable for their beautiful shining marble. On the sides of the doors he observed figures larger than life, some sitting and others standing. They wore long beards and their hair descended to the shoulder, while their robes extended to the feet. Not far distant are other chambers, but of these nothing remains except the door and window frames. 'Not far from these rooms,' he continues, 'is a square column in which is a polished stone, some say of jasper, in which are engraved singular characters or writing, which no one can read. They seem as if they had been inlaid with gold.' The rest of the platform is beautiful and level, and measures about 300 by 200 paces. Mandelslo has illustrated his description by an engraving that scarcely does justice to the text. After the statement that the platform was reached by four stairs, we were not prepared to find in the illustration a single row of steps leading straight up at right angles. The translator, Davies, seems to have thought that by the four stairs

were meant a single flight at each corner of the platform. The four 'walls' of the Porch appear as a series of detached stones placed in a row, one after the other, along the western line of the terrace. The animals are cut out of the front of each stone, but they have no appearance of supporting any portion of the structure. Beyond, at some distance to the east, is a small square building, having on one side the slab with the inscription. There is no indication whatever of the sculptured terrace, which is indeed wholly forgotten in the text. The columns, however, at length appear for the first time in the true direction to the right of the entrance. From them an immense wall extends right across the platform to the east. It is pierced below by one large and three other smaller doors. Above, apparently belonging to a second story, are a series of seven or eight double windows, while still higher we observe several figures of men and animals. This great structure obscures the view of the tombs on the hill, and they are not mentioned in the text. Olearus, in his notes, refers to Barbaro, and, at second hand, to Don Garcia. But his chief reference is to Herbert, from whom he quotes the whole of the account given in the earlier editions of the Travels.

Mandelslo's book was translated into English by John Davies, and it appeared in 1662, four years after its original publication; but the illustrations were not reproduced.[1] The translator has adopted the very singular method of incorporating with the text the notes that Olearus added from other writers. Mandelslo is thus made to appear as if he had quietly appropriated without acknowledgment the observations made by Barbaro, Don Garcia, and Herbert. The translator is, however, wholly responsible for this peculiar result.

[1] *The Voyage and Travels of J. Albert de Mandelslo, rendered into English by John Davies of Kidwalley*, London, 1662.

At the time Olearus issued his edition (1658) the text, taken together with the notes, probably resumed all that was then known concerning Persepolis and the cuneiform letters; and the translator made no independent additions.[1] But in the same year (1658) the third volume of Della Valle's Travels was at length published, in which he gives the account of his visit to the ruins. His fame soon became well known in England, and a translation of his Travels to India appeared in 1665, along with those of Sir Thomas Roe.

Nearly thirty years had now elapsed since the last edition of Sir Thomas Herbert's book was published (1638). He was still living, and no doubt he became sensible of the deficiency of his own account of Persepolis in comparison with that of Della Valle. It appears also that a Mr. Skinner had recently returned from Persia, with whom Herbert had the advantage of conversing. He had, moreover, preserved 'the mixt notes' he took at the time of his visit, nearly forty years before, and with a memory thus refreshed he sat down to compose a greatly enlarged account of the famous ruins.[2] He also gave instructions to the engraver Holler to execute an entirely new design of the place, which was accomplished in 1663. The view is still characterised by the most surprising inaccuracy. It is upon a much larger scale, and is a far more pretentious work than its predecessor. We now ascend to the platform by a double staircase parallel to the line of the terrace, but it is still erroneously represented projecting prominently from beyond it. At the summit we observe the four animals and the two columns of the Porch. There is, however, no trace of the walls the animals

[1] It will be remarked that Olearus does not mention Della Valle, whose book was not then published.

[2] *Some Years Travels*, by Sir Tho. Herbert, Bart. (1665), pp. 145-59.

supported. In front are an elephant on one side and a rhinoceros on the other, having 'visages with beards and long hair like men, agreeable to that fourth beast which Daniel looked upon.' One of the other animals is 'like unto a Pegasus,' 'trapped with warlike mail'; but the fourth 'is so disfigured that it cannot be described.' Turning to the right, we see at the edge of the terrace a tombstone of the usual pattern, engraved apparently with cuneiform letters. It stands entirely by itself, and is no doubt the jasper or marble table referred to in the text. Beyond it, upon the same level, are a large number of columns and the ruins of many others are to be seen strewn upon the ground. He tells us 'there be but 19 pillars at this day extant, yet the fractures and bases of 21 more are perspicable.' 'It is evident,' however, he continues, 'there were in all a hundred pillars when the place was in perfection, as appears by the vacant spaces and also bases . . . which are yet visible.' The entire centre of the picture is occupied by a raised platform, no less than thirty feet above the level of the porch and columns. It is approached by a double staircase constructed in precisely the same manner as the first. The north wall of this elevated terrace stretches across, west to east, from the columns below to the hill that bounds the platform on the east, and it is completely covered from end to end with bas-reliefs. This sculptured wall was entirely forgotten by Herbert in his earlier editions, and it is now described elaborately, the description being evidently borrowed from Della Valle, a few errors being introduced, possibly from the 'mixt notes.' Having ascended to this elevated terrace, we come to a huge two-storied building, open at the top, resembling a modern factory gutted by a fire. It is divided into three compartments, and is represented as occupying

the whole western side of the platform. Both within and without, from top to bottom, we observe the walls are entirely covered with bas-reliefs. On turning to the text for an explanation, we find, however, that the building still possesses its former modest dimensions; but 'the walls and broken arches were wrought or pourtrayed with figures resembling some great persons on horseback, after whom proceed several others in sacerdotal habits.' He has still a clear recollection of the 'gold that was laid upon the Freez and Cornish, as also upon the trim of Vests.' Turning away from this wonderful building, we observe a small ruin in the north-east corner, standing like the one just described upon the upper platform. This corresponds in position to that occupied by the Hall of the Hundred Columns, and the description he gives of it is one of the most singular portions of his narrative. He came, he says, to a large square room, where he observed bas-reliefs of a great person, and 'sundry petitioners, but in several habits, as men of several nations,' besides guards armed with spears. Near this he penetrated into a vault, 'flagged at the bottome with square marble stones,' which led him into a 'fair room or chappel,' 'supported by four pillars 4 yards about, 8 in heighth and 4 yards from each other.' He found the entrance elaborately sculptured with the figures of men, apparently priests, with uplifted hands. By another subterranean passage he reached a second chapel, also supported by four pillars seven yards high. Upon the arch is a man of colossal size with a lion couchant at his feet. Near him a king seated on a chair of state and on either side two rows of flamens. A few paces thence he beheld two giants, who by pure force subjugate two lions, and not far off a great prince, holding a sceptre or Pastoral Staff. On one side of him stand the Satraps, and on the other the Magi or priests.

Opposite is a prisoner in chains, who he conjectures may be Daniel or Croesus. Beneath are six ranks of guards carrying spikes. Such is the first detailed account we have of the Hall of the Hundred Columns, and the elaborate sculptures with which it is adorned. It is remarkable that the accumulation of rubbish should have been so great that Herbert says 'tis presumed that the greatest part of the pile was vaulted underground'; and that, according as he burrowed laboriously through the *débris*, each of its great doors should appear to him like vaulted chapels.[1]

The hill that overhangs the platform on the south-east is shown by the drawing to be covered by a wonderful work of art. Four rows of figures support a stage whereon we observe a kneeling figure; but the serpent is now seen grovelling upon the ground, and the centipede of the earlier edition has developed into 'a demon of as uncouth and ugly a shape as well could be imagined.' 'It is of a gigantic size . . . discovering a most dreadful visage twixt man and beast. This monster has seven several arms.' He now treats us to three lines of inscriptions 'for better demonstration, which nevertheless whiles they cannot be read, will in all probability like the Mene Tekel without the help of a Daniel hardly be interpreted.' He agrees with Della Valle that each character might represent a word—or at least a syllable. He also agrees with the same authority that the writing ran from left to right, but in the sample he gives us, two or three characters are placed upside down which, if they had fallen under Della Valle's notice in that position would have entirely upset his argument from their 'posture and tendency.' Herbert compared the characters with 'twelve several

[1] Herbert (1665), p. 153. For a photograph of the north door see Curzon, *Persia*, ii. 176.

alphabets in Postellus and with the fifty-eight alphabets which Purchas had borrowed from the learned Gromex,' but he could not perceive the least resemblance. They are, he says, 'like Pyramids inverted, or with bases upwards, or like Triangles or Deltas.' He, however, recommends the study to 'ingenious persons who delight themselves in this dark and difficult art or exercise of Deciphering.' The language must have been known to Daniel, who was probably the architect of this palace as of 'Shushan and Ecbatan'; for we know that he was a 'civil officer' under 'Nebuchadnezzar, Belshazzar, Astyages, Darius and Cyrus.'

During the remainder of the century we are chiefly indebted to French travellers for the gradual accumulation of more correct information upon this subject, and it was greatly to their advantage that they could always depend upon a hospitable welcome and much store of information from the friendly Superior of the Capuchins at Ispahan. When Persia was first rendered accessible to Europeans by the liberal policy of Shah Abbas, numerous missionaries flocked to the capital in the hope of winning converts to the Roman faith. We have already seen that the Augustinian Friars who arrived with Gouvea were awarded a disused palace as a monastery. They were followed, in 1608, by Carmelites from Rome. In 1627, Father Pacifique, of the French Order of Capuchins, obtained permission to establish missions at Ispahan and Bagdad; and during the second half of the seventeenth century their house became a resort of the principal European travellers. The rule of Père Raphael du Mans covered the whole of that period. He is first heard of at Ispahan, in 1644, where he remained as Superior of the Order till his death, in 1696, at the age of eighty-three. Not

long after the settlement of the Capuchins, the Jesuits also made a similar attempt, but without much success; they were, however, given permission to open schools at Tauriz and a few other places in the south of Persia. It must be recollected that the object of these religious persons was not so much the conversion of Mahomedans—an attempt which when discovered was always rigorously punished—as the extension of the Roman sway over the Georgian and other native Christians. Resident agents of the Dutch and English East India Companies had also long been settled in the country. The Shah presented them with handsome residences at Ispahan and Shiraz; and they had permanent establishments at Bunder Abbas. The French still remained at a great disadvantage. Their first East India Company was formed in 1604, but for more than thirty years it did not fit out a single ship. At length its term of privilege expired without its ever having been exercised (1635), and a merchant of Dieppe despatched a vessel on his own account. A small Company was eventually formed and an attempt made to found a trading colony at Madagascar in imitation of those possessed by the English and Dutch at Bombay and Ceylon (1643); but no result followed and its privileges likewise lapsed. In 1664 another effort was made, and three agents were sent to Persia to reside at Ispahan, Shiraz, and Bunder Abbas, while two envoys were accredited to the Court. These efforts were, however, productive of little result, and were chiefly felt by the enmity they excited among the Dutch against the eminent French travellers who are now to engage our attention.

The names of Tavernier, Daulier Deslandes and Thévenot fill the latter half of the seventeenth century. Tavernier enjoyed an exceptional reputation as a traveller and merchant throughout the whole of that

period. He was born at Paris, in 1605, of a Protestant family, and began his wanderings at the early age of fifteen. At first he followed the profession of a soldier of fortune, but he soon exchanged that precarious calling for the more lucrative pursuit of a travelling jeweller. He visited the East altogether six times between the years 1632 and 1668. His chief dealings were with the Shah of Persia, but he also extended his travels to India, and he was the first Frenchman to visit the Court of the Great Mogul. He brought back jewels from the mines of Golconda and from the pearl fisheries of the Persian Gulf, and after having them polished and set in Paris, he sold them at greatly enhanced prices to Indian princes and to the Shah of Persia. He was the first to reveal the riches of the East to his countrymen, and he enjoyed the favour of Louis XIV., from whom he received a patent of nobility. It was on the occasion of his sixth and last journey to Persia, in 1664, that he was accompanied by Daulier Deslandes, a young artist who was included among his eight 'serviteurs,' and who passed the year with him.[1] Although travelling together in this manner for the sake of convenience, Daulier was in fact charged with a special mission on behalf of the French merchant company.[2] The two travellers left Ispahan in 1665 on their way to Bunder Abbas, and they seem on that occasion to have visited Persepolis together. Some days later they overtook M. de Thévenot at Bihry, in Lars (March 26) and the whole party proceeded to the coast. Tavernier went on to India, but Daulier and Thévenot returned to Persepolis (May 1665), and it was probably during this second visit that Daulier found time to

[1] Joret (J. B.), *Tavernier* (1886), p. 180.
[2] *Estat de la Perse*, p. lxxviii.

make his investigations.[1] He published the account of his travels in 1673, and among the illustrations that adorn his book there is one of Persepolis or, as it is called, Tchelminar.[2] The engraving is vastly superior to anything that had yet appeared: indeed the fanciful and erroneous pictures given by Herbert and Mandelslo do not deserve to be put in comparison with it. We now for the first time obtain some idea of the real appearance of the ruins. The view is taken from the west, and shows correctly the peculiar features of the stairs, sunk into the wall of the terrace, and ascending in double flights parallel to it. We observe also the remarkable indentations in the formation of the platform, which Della Valle thought were designed for its defence. The four walls of the Porch, separated by the two columns, are intelligibly drawn, though their height is inadequate and the animals do not stand out with sufficient boldness. The fourfold ascent by single flights to the upper platform is clearly shown; and for the first time we find the Columnar Edifice of Xerxes correctly placed above. The still more elevated position of the Palace of Darius is plainly marked and its ruins fairly represented. The absurd appearance it presented in the drawings of Herbert and Mandelslo now finally disappears, and we obtain something like a correct view of the southern portion of the platform. Beyond the door and window frames of the Palace of Darius we observe to the south-east the ruins of the somewhat similar edifice of Xerxes. The latter is depicted upon a much higher elevation, and the western staircase leading to it comes too prominently into view. The east side of the platform is still indistinct. The Central Edifice and the Hall of the Hundred Columns

[1] Thévenot (Jean de), *Voyages*, 5 vols. (Amst. 1727), iv. 491.

[2] *Les Beautés de la Perse*, par le sieur A.D.D.V. (Paris, 1673), pp. 55–66.

are somewhat confused: the latter edifice appears erroneously placed upon the central platform. No adequate representation of the Tombs upon the hill is attempted. The description that accompanies the plate evinces much accurate observation. He treats the platform as divided into three different elevations, and in many places he observed that the rock itself was the foundation of the edifice. The first animal he met on the porch resembles an elephant; the others, looking east, have wings. Strangely enough he dismisses the sculptured stairs with a mere passing notice. He merely observes that the Columnar Edifice is reached by two single flights 'whose sides are ornamented by bas-reliefs.' Following Della Valle, he correctly divides the columns into a central group of thirty-six and porticoes on the three sides; but he was wrong in conjecturing that the front row consisted of only eight columns in two rows of four, and in supposing that they were intended to support idols. Only nineteen were then standing, but there were two in the Porch, and another in the plain five hundred paces from the platform. He noticed two others at a distance of three leagues 'to the left.' He observed that the columns of the central group have a double capital resembling those in the Porch, and have round bases. From this great ruin he ascended ten or twelve steps to the remains of some chambers, evidently the Palace of Darius. In front, he 'saw the vestiges of several small columns,' the first reference we have to the ruins of the Palace of Ochus. Turning towards the mountain, he came upon other chambers, apparently the Palace of Xerxes from the description of the steps descending abruptly to a lower platform. He also notes 'a fine building with bas-reliefs,' possibly the Hall of the Hundred Columns. He mentions the two sepulchres,

where he observed a man with a bow sacrificing to an idol which resembles a satyr. He was unable to visit Naksh-i-Rustam. He was greatly impressed by the general effect produced by these ruins, and he considered them 'one of the finest remains of antiquity.' He dwelt especially upon the immense number of bas-reliefs; he estimated that there were at least two thousand, many of them only showing their heads above ground. In addition to the general view, he has drawn a few of the bas-reliefs, among others that of the man sacrificing to the satyr. Others represent the personage beneath the parasol, or fighting the lion. These sketches are insignificant in size and execution, but they are a great advance upon the preposterous attempts of his predecessors. He shows an inscription round an arch, but it is of a purely imaginative character; and he merely records the existence of letters 'which no one can read,' many of which, he adds, were gilt. He adopted the opinion of Père Raphael that the edifice was a Temple and erected by Assuerus, though he tells us that others maintain that it was the Palace of Darius.

A year after the publication of the 'Beautés de la Perse' a much more prosaic narrative appeared (1674), written by Daulier's travelling companion, M. de Thévenot.[1] De Thévenot was born at Paris, in 1633. He found himself at an early age in possession of independent means, and he began his travels at nineteen. He first visited England, which seems to have been then regarded as the training ground where the traveller might be inured to the perils of foreign adventure (1652). He subsequently visited Holland and Germany, and he spent a few years in Italy. He had the advantage of meeting M. d'Herbelot at Rome,

[1] *Voyage de M. de Thévenot*, Bk. III. chap. vii. pp. 501 ff.

who afterwards gained a great reputation as a linguist and Orientalist. It may have been the incentive communicated from this source that determined Thévenot to visit the East and to devote himself to the acquisition of Eastern languages. The two friends planned a journey together, but at the last moment d'Herbelot was prevented from leaving. Thévenot left Rome in 1655, at the mature age of twenty-two, and passed a considerable time visiting the islands of the Mediterranean, Turkey, the Levant and Egypt.[1] After an absence of seven years, he returned to Paris and published an account of his journey, which appeared in 1664, in two volumes. He had taken pains to acquire several Oriental languages, Turkish, Arabic and Persian, and while staying in Paris, he devoted himself to the study of such sciences as were then within reach. The proof-sheets of his book were scarcely dry when he left for Persia (October 1663). His route lay by Aleppo to Mosul, which he reached about the end of July 1664. From thence he dropped down the Tigris to Bagdad, and struck across by Hamadan to Ispahan, where he arrived in October.[2] Here he remained the guest of Père Raphael till February 1665, when he took the opportunity of going to Bunder Abbas in the suite of Tavernier. The larger portion of the baggage mules were employed in carrying the merchandise of that enterprising traveller to the coast; but it does not appear that he himself joined the party till they were far on the road. They arrived at Bunder together, and here Thévenot was destined to meet with a severe disappointment. The French were at that time making an attempt to revive their East India

[1] Thévenot (Amsterdam, ed. 1727), vol. iii; see preface and pp. 1–2. *Estat de la Perse*, pp. lxxv–lxxviii.

[2] Thévenot, iii. 262.

Company, a step that roused the jealousy of the Dutch to such an extent that they positively refused to give him a passage. They wished to preserve the secrets of the trade entirely to themselves, and Thévenot feared that even if he were received on board, their patriotism might go to the length of imperilling his life.[1] At Bunder Abbas itself, where the Dutch had recently become completely the masters, he scarcely found himself safe. The only person he could trust was the agent of the English Company, who took him under his protection and gave out that he was an Englishman. He was compelled, therefore, to return to Shiraz, and it was on this occasion that he enjoyed the companionship of Daulier Deslandes. They visited the ruins of Persepolis, and Thévenot made copious notes of his impressions. In the autumn he made his way to Bassora, where he found a passage to India on board an Armenian vessel. He seems to have returned in the spring of 1667 in company with Tavernier.[2] On their way from Bunder Abbas they once more visited Persepolis, and upon this occasion they found Chardin there. Thus by a singular accident the three great travellers stood together among the historic ruins.[3] Thévenot died soon afterwards, at the early age of thirty-four, at Maiana, the ancient Atropatena, thirty leagues from Tauris (November 1667). Two volumes of his Travels, up to the time of his arrival at Surat, were published in 1674, and a third, on India, in 1684. A complete edition appeared in five volumes in 1689. Numerous others followed, and before the end of the century the work had been translated into English, Dutch and German.

It cannot be said that Thévenot's description of

[1] Thévenot, iv. 486. [2] Joret, p. 203.

[3] *Estat de la Perse*, p. lxxvi.

Persepolis contributed much to the elucidation of the plan of the building. He, however, gives an accurate though somewhat complicated description of the double staircase. He explains for the first time the position of the animals on the pilasters of the Porch—their heads facing the front, and their half bodies in demi-ronde adorning the inside of the passage. He thought they were cut out of a single block, those facing the stairs representing elephants and the others griffins. He gives a fair account of the sculptured wall, which previous travellers had so frequently overlooked. He describes the projection in the centre, with a single stair at either end, and the single flights at each end of the terrace. They are, he says, almost entirely buried beneath rubbish, which may perhaps account for their having so frequently escaped observation. 'Nevertheless one sees several figures on that portion of the wall of the terrace which is above ground.' He noticed the combat—a lion and bull—and the three rows of bas-reliefs, representing, as he thought, a sacrifice or a triumph. He observed the various arms of the men, and the different animals, the sheep, oxen and dromedary, that figure in the procession. He conducts the reader up the stairs to the platform strewn with columns, some buried, some broken, and others marked only by their bases. Seventeen were then standing, and he conjectured that there were originally twelve rows of nine in each. He remarked the strange style of the capitals, and fancied they had been surmounted by statues, or perhaps by idols. He proceeds to the square building beyond, where he beheld 'an old man followed by two valets,' one holding a parasol and the other a crozier. But at this point his narrative becomes confused and we follow him with difficulty. In his description of the eastern part of the platform,

however, he enumerates six distinct buildings, which appear to be formed by the ruins of the Great Hall of the Hundred Columns and those of the Central Edifice united. Although the description of the arrangement of these buildings is hopelessly confused, we obtain for the first time an adequate account of the remarkable bas-reliefs found among them. He describes the personage seated upon a chair of state, a staff or sceptre in his hand, while beneath him are three rows of figures, one over the other, with uplifted arms, supporting those above. The winged figure is, he says, an idol seated upon an arc, with the body passed through a ring. He found another similar piece of sculpture with three rows of figures among these ruins, and he also mentions the great bas-relief in the north door of the Hall, where the seated personage is elevated above five rows of figures, but he failed to notice that these were guards.[1] He divides the edifices on the platform into three rows of buildings one behind the other from west to east, the first two 'rows' containing, he says, each four buildings and the third five, of which the third is the largest, and we thus arrive at the thirteen buildings in all. His description of the Tombs is more intelligible. They resemble, he says, the façade of a temple cut into the rock. Below are four columns with capitals representing the head and throat of an ox. In the centre is the entrance to the tombs. They support an architrave approaching to Doric in style, and ornamented by lions. Above are two rows of arcades composed of human figures about two feet in height. Over them, in the centre, is an idol, resembling a winged man. On the right is a person praying, and to the left a pedestal surmounted by a globe. At either end is a portion of a round column with the head of a bull, and below, on

[1] Thévenot, iv. 510.

each side of the second row are two men, one over the other, armed with pikes. It was impossible to gain access to this tomb, for it was full of water, but on entering the other to the south of it he found three sepulchres cut into the rock like the basins of a fountain. In the centre of the cave is a slab that appears to cover a tomb. Beyond the platform, to the south, he observed a single column still standing, and to the north the ruins of a porch. On his way to Naksh-i-Rustam, he observed on his right hand another column standing. He was inclined to believe that Chehel Minar had been a temple, for it is evident the buildings have never been roofed, and the site itself was not large enough for a palace.[1] Finally, he apologises for the confusion in which part of his narrative is involved, and protests, probably with truth, that if he had added anything more to his description he might only have increased its obscurity.

Two years later, Tavernier added his contribution to the subject[2] (1676). Although he seems, as we have said, to have visited Persepolis along with Daulier, in March 1665, yet he was evidently but little influenced by his opinion. He had seen the ruins several times, and his judgment on the subject had been no doubt already formed. He tells us that on the occasion of one of his visits he was accompanied by an artist named Angel, a Dutchman, who, it appears, was commissioned by Abbas II. to make drawings of the ruins; and the estimates they formed are in striking contrast to those of Daulier. Tavernier was too much concerned with practical affairs to be greatly interested in antiquarian research; and his eye, trained to dwell on the minute

[1] Thévenot, iv. 520.

[2] For Tavernier see *Les Six Voyages* (Utrecht, 1712, 3 vols.), i. 728; and the excellent Memoir of him by M. Joret, 1886.

beauty of the precious stones, saw little to admire in colossal mounds of chiselled marble. Nor was the prosaic Dutchman who accompanied him more susceptible to this form of beauty. Angel spent eight days in making drawings of the various ruins, and in the end expressed regret that he had wasted so much of his time. As for Tavernier, he declared he did not consider them worth the labour of a quarter of an hour. The bas-reliefs seemed to him to be wretchedly executed, and he could only recollect to have counted twelve columns.

Shortly afterwards there appeared a book by Jean Struys, a Dutchman, whom Sir W. Ouseley rightly styles 'the lying traveller.'[1] In it there is an engraving of what is called the 'Tomb of Persepolis,' which is such a grotesque misrepresentation that we can scarcely believe even Struys responsible for the vagaries of the artist he employed. He observed that the number of columns had been reduced to eighteen, and he estimated their height at thirty-eight feet. He was especially struck by the beauty of the staircase; and he was the first to make the correct suggestion that the animals guarding the porch were lions. He noted the numerous bas-reliefs whose beauty had not yet been effaced by time; but he fancied he saw battle scenes depicted among them. He thought the cuneiform 'characters strangely resembled the Arabian, though no one has yet been able to decipher them.'[2]

An agent of the East India Company, Mr. S. Flower, made a collection of various inscriptions, and among others of 'one consisting of two lines in the nail character, or pyramidal shape, such as is impressed on

[1] *Les Voyages de J. Struys* (Amsterdam, 1681). Ouseley (Sir W.), *Travels*, ii. 232.

[2] Struys, pp. 316–317.

some bricks lately found in the neighbouring countries.' These appeared in the 'Philosophical Transactions' of 1693, and were reproduced by Dr. Hyde, who, quoting Flower, says that the characters are not found except at Persepolis, though some missionaries say they are known and in use in Egypt. He adds that they appear to be written from left to right. The inscription as copied in Hyde is punctuated after each letter,[1] and exhibits a miscellaneous collection of characters selected from the three descriptions of writing.

From what has been said it will be seen that down to the end of the seventeenth century, or a hundred years after the visit of Gouvea to Persepolis, the chief authorities upon the subject were still Don Garcia and Della Valle. Herbert perhaps enjoyed a wider popularity, but so far as his account was correct he depended chiefly upon other writers. The description given by Mandelslo and Daulier added little to the knowledge already acquired. Mere verbal descriptions, however, even by the most graphic writer, could never convey so vivid an impression to the mind as a pictorial representation. The drawings made by Don Garcia were not reproduced by his translators, and if they enriched the original Spanish edition, that work is so little known, that it has not even yet found its way to the British Museum. The drawings of Della Valle had not then[2] and, we believe, have never since been published. Mandelslo gave a tolerable drawing of the tomb at Murgab; but his view of Persepolis is little better than the plates in the earlier editions of Herbert.

[1] Cf. *Philosophical Transactions Abridged*, iii. 543, where reference is made to *Phil. Trans.* June 1693; xvii. 776. Hyde (Dr. Thomas), *Veterum Persarum . . . Historia*, 1760, pp. 548, 557, Pl. 14. *Cf.* Evetts (Basil T. A.), *New Light on the Bible* (1892), p. 74. Menant, *Les Langues perdues* (Paris, 1885), p. 62.

[2] Daulier, *Les Beautés*, p. 55.

The English translator omitted them, and it is little likely that a book written in German and published in the remote town of Schleswig ever enjoyed a wide circulation. The engraving given by Herbert, even in his latest edition, is still grossly incorrect. It was executed by an artist who had never visited the spot, and Herbert was himself entirely unable to convey a true idea of the appearance and position of the different ruins. Daulier Deslandes at length made a great advance upon all his predecessors, and placed the student in a position to form a tolerable conception of the general aspect of the buildings.

Still less progress had yet been made towards the reproduction of the cuneiform letters. Della Valle had given five of the characters in the Italian edition of his Travels, but his French translators omitted them. Herbert contributed three lines; Daulier gave a short inscription taken from an arch; and Flower had quite recently increased the available material by two lines. They were all very imperfectly copied, but it was known that large numbers of similar inscriptions appeared in various parts of the ruins. Dr. Hyde, the learned Orientalist, concluded that they were not letters at all, but simply designed as ornamentation. He entirely repudiated the suggestion, which was already current, that they had any resemblance to Chinese.[1] He went so far as to upbraid the artist for having been the cause of so much torment to critics and men of learning. The whole matter was, he declared, beneath his notice, and he would not have alluded to it if he had not feared that his silence might be misconstrued.[2]

This opinion was occasionally repeated both in

[1] This view may have been suggested by Chardin, who was known to Hyde. (Hyde, p. 548, *note.*)

[2] Hyde, *Vet. Pers. Hist.* p. 557. *Cf.* Menant, p. 65.

France and Germany down to the close of the eighteenth century. Early in that century, however, the materials for forming a more accurate judgment began rapidly to accumulate. The three travellers Chardin, Kaempfer and Le Bruyn all made important contributions to the subject. Chardin was the son of a rich jeweller in Paris, and early in life he was sent on business to Persia and India. On his return in 1681 he settled in England and was knighted by Charles II., who afterwards sent him to Holland as his ambassador. Chardin's three visits to Persepolis were made as far back as 1666, 1667 and 1674, but his account of it did not appear till 1711. It was published at the same time in two different forms: in three volumes quarto and in ten volumes duodecimo, but with the same text and plates. This edition was somewhat expurgated to avoid giving offence to the Catholics, but another came out in 1735, which included the suppressed passages. Chardin died in London in January 1713, two years after the publication of the complete edition of his Travels, but before he had time to finish the most cherished work of his life, which was a Commentary on the Bible, based upon his knowledge of Oriental customs. It is said he was assisted in the composition of his works by Charpentier, a Member of the French Academy, and the magnificent drawings, twenty-three in number, made of Persepolis, are the work of M. Grélot, whom he brought with him for the purpose.[1] They convey a most admirable impression, and the student can for the first time realise the splendour of the ruins: which he could never have grasped from the confused description of travellers.

[1] See *Voyages de Monsieur le Chevalier Chardin* (Amsterdam, 1711), iii. 98 ff, Plates 52–74; but four of these are devoted to copies of the inscriptions (Pl. 69–73).

They include two general views upon a large scale. In the first a few inaccuracies detract somewhat from its value. We observe birds of a highly imaginative design perched upon the columns of the Porch; but whether they are designed to represent portions of the capital, or merely temporary visitors, does not appear. The sculptured stairs are incorrectly represented, showing only a single ascent, and without the projecting flight in the centre—a deficiency removed in the description given in the text. The columns are massed too closely together; the Palace of Darius is placed on the south-west extremity of the platform, in the position that should be left vacant for the Palace of Ochus; and the stairs appear on the north instead of on the south side of the Palace. On the other hand, we find the Hall of the Hundred Columns correctly placed for the first time on the same elevation as the Porch. The second view is more valuable. It is taken from about the same place as Niebuhr subsequently selected. The eye first rests upon the Hall of the Hundred Columns with the cistern and entrance porch to the right. Looking southwards, the Columnar Edifice is seen to occupy a prominent position, and beyond it lies the Palace of Darius, standing upon its own terrace, but, by an unaccountable error, with the façade turned to the east instead of the south. It appears unduly cramped between the columns and the Palace of Xerxes, which rises upon its terrace at an apparent elevation considerably higher than that of Darius. The double stairs leading to it on the east, and the straight flight down to the southern terrace are given. Under the hill we see a tolerable representation of the south-east edifice, and as we turn back to the Hall of the Hundred Columns we observe a poor representation of the Central Edifice. There is a tendency to represent

the ruins in too perfect a condition: the lower portion of the massive piers at the entrance have the appearance of being intact; the eastern stairs of Xerxes are also represented as far too well preserved, and the artist has entirely omitted the great mound opposite the Central Edifice. Apart from these defects, the drawing gives an intelligent design of the place, and it will enable the reader to recover from the nightmare into which he may have fallen after reading the account of Thévenot, and even the description of Chardin himself. The other plates are devoted to separate drawings of the more remarkable objects. One (Plate 54) makes the first attempt to reduce the platform to scale; but the buildings are not indicated upon it. Another gives the Great Staircase (Plate 55); two are devoted to the Porch (Plates 56 and 57); two to the Sculptured Stairs (Plates 58 and 59); two to the Columns of the Hall of Xerxes (Plates 60 and 61). The bas-reliefs are treated with special attention. Besides those on the Porch and the Sculptured Stairs, we are shown the King walking beneath the parasol (Plate 62); seated upon the chair of state above the five rows of guards (Plate 63); and again over the three rows of suppliants (Plate 64). Special plates are devoted to his contests with wild animals (Plate 65), and to the guards at the entrance to the Palaces (Plate 66). A plate is devoted to each of the Tombs on the hill (Plates 67 and 68), and another to a general view of the tombs at Naksh-i-Rustam. By means of these admirable drawings the Persepolitan ruins received their first adequate illustration. Daulier had indeed contributed a general view of some excellence; but the few and insignificant sketches he attempted of the bas-reliefs were the only drawings that had yet appeared. It is doubtful whether anything much better has since been produced than the

magnificent views of the sculpture on the Great Portal of the Hall of the Hundred Columns and the drawing of the Tombs overhanging the Platform. The sculptured staircase is drawn upon an immense scale. It fills two plates, one opening out in length equal to twelve pages of the book, and the other to five or six pages. The execution is admirable as a work of art, and as such it has perhaps never been surpassed. In point of fidelity to the subject it may not be more in error than many of its successors. At that period the sculptures were no doubt in a more perfect condition than they since became after a lapse of a century or two, and Chardin describes them as being in his day 'still so complete and so sharply defined that the work appears to have only just come from the sculptors' hands.' The plates are no doubt far from reaching photographic accuracy; but this objection applies, if not equally, to the later drawings of Porter and Flandin. When we look at the general view of the platform and observe the remarkable precision with which the various ruins are marked upon it, we are surprised to find the description in the text so complicated and confused.[1] The pencil of the artist seems to have followed with perfect clearness the relation to each other of the various parts of the ruins; but in Chardin's account of them, from the point where he leaves the Columnar Edifice, we become lost in his description of a perfect maze of apparently isolated structures. When we advance from 'the marvellous temple choir,' as he calls that edifice, and proceed to follow his 'straight line,' we can only very dimly recognise where we are going. It is not, indeed, till we arrive at the Tombs that we once more recover consciousness of our position. While nothing can be learned of the general disposition of the

[1] *Voyages du Chevalier Chardin* (ed. Langlès, Paris, 1811), viii. 242–318.

ruins from the account of Chardin, he has furnished a careful description of detached portions of the edifice. From him we learn that there are inscriptions over the animals on the Porch. He gives a long and minute description of the bas-reliefs on the sculptured staircase. He shows that the dress and arms of the various figures are intended to indicate the countries from which they came, and he accompanies his dissertation with much learned commentary. He thought the Columnar Edifice had originally consisted of twelve rows of ten columns, or one hundred and twenty in all; and he is quite sure he counted three rows with ten in each. He noted also that 'the capitals are different, not only in their ornamentation but also in the fact that some are single and others double.' The conflict between men and animals depicted on the side doors he thought represented the struggle of heroes with different nations, which, as in the Book of Daniel, were symbolically represented by animals. He considered the stately personage under the parasol united in his own person the offices of both priest and king. The winged figure seemed to him to represent the soul ascending to heaven, amid the clouds of sacrifice; and he rejected the impious conjecture that it denoted a serpent or satyr or worse. He was fully convinced that the ruins were those of a temple and that the Columnar Edifice had been the 'choir' where the victims were immolated. The great difficulty of supposing that the principal buildings had ever been roofed favoured the supposition of its ecclesiastical character. He reviews at great length the different opinions as to its origin; some ascribe it to the period before the Deluge, others to Solomon; but he finally decides in favour of Jamshid, the fourth King of Persia, who, he ascertained, had flourished about the

time of the descent of Jacob into Egypt.[1] This opinion as he takes care to emphasise, would throw back the construction of the edifice many centuries before Darius. The idea that the ruins represented the castle and palace of Persepolis was first advocated by Don Garcia, but it had long lost its popularity and the rival opinion first put forward by Della Valle, that they were the remains of a temple had already secured the adhesion of Daulier and Thévenot. Chardin now gave it the support of his authority, and he affected to scout the opposite view as 'a vain and ridiculous tradition,' although later investigation has affirmed its truth. He was followed by Kaempfer, and encouraged by the English traveller Fryer, who qualified the opinion that it was 'Cambyses' Hall' with the doubt that it might after all 'be the ruins of some heathen temple.'[2]

Passing to the tombs, he rightly conjectured that the round object above the fire altar represented the sun, 'the great divinity of the Persians.' More adventurous than Thévenot, he effected an entrance into the northern tomb over the Hall of the Hundred Columns, and describes it as a square space of twenty-two feet and twelve feet high. At the side he noticed two tombs of white marble sixty-two by twenty-six inches and thirty inches high, both full of water. Chardin thought that the entire façade of the tomb was concealed after its construction by a covering of earth. It was the common belief of the country people that Nimrod had been buried in the first of these tombs and Darius in the second, but Chardin thought that both had been occupied long before the time of Darius.

He mentions the column in the plain three hundred paces from the platform, perfect except the capital.

[1] Chardin, *Voyages*, viii. 401.

[2] *A New Account*, by J. Fryer (London, 1698), p. 251.

From this spot across to Naksh-i-Rustam ruins may be seen scattered over the whole plain and it was here he thought the city of Persepolis had stood, with the Temple to the east and the Tombs to the west. It reached northwards between the hills where fallen columns, pieces of architraves and bas-reliefs might be observed, and he was told that there were traces of ruins within a circuit of ten leagues.

Chehel Minar is honeycombed by subterranean passages, possibly drains or aqueducts, and Chardin explored several of them. He found one of sufficient height to walk through upright, and he advanced nearly a mile, when he was forced to return. The people of the country told him it extended for six leagues and leads to subterranean tombs. A similar passage connects the temple with Naksh-i-Rustam.

Chardin noted many inscriptions among the ruins, sometimes even upon the robes of the figures.[1] He observes that the strange characters are sometimes three inches in height, and there can be no doubt that some of them, especially the capitals, were gilt. This was in fact the opinion of several of the early travellers, such as Mandelslo and Daulier Deslandes; while Herbert saw gilding on the bas-reliefs themselves. The writing is composed of only two kinds of characters: one resembles an oblique triangle, the other a pyramid. The first has 'la pointe ou angulaire, ou en bas ou en travers.' The second may assume six postures: 'when perpendicular, the pointed end may be either top or bottom; when horizontal, either to left or right; when diagonal, it may point either way.' It may be read not only from left to right, but also from top to bottom like Chinese. Some consider the writing is purely hieroglyphical, but Chardin thinks it is a true writing like our

[1] Chardin, viii. 321-3.

own—but it will be impossible ever to tell whether it has vowels, or anything else about it. In order to illustrate his opinion concerning the various directions in which the characters might be read, he made a copy of the inscription that runs round the window of the Palace of Darius. This is the first complete inscription ever copied, and unfortunately it contributed much to impede the progress of decipherment.[1] Although consisting of only one line, it is in three different scripts, and its inspection served at once to confirm the opinion of Chardin that the wedges might be turned in any direction—for to the left of the window we see the thick end of the wedge at the bottom; on the right of the window it is in the reverse position; while on the top it is turned to the left. It was long before it was discovered that this inscription was to be read, like the legend running round a coin—the line to the left being written running up; and the line to the right running down; so that in reality the wedge always preserves the same direction.

He visited Naksh-i-Rustam, and was the first to give an account of the Inscriptions on the second tomb. The one above consists, he says, of fifteen lines; the other near the cornice and the door is shorter. He induced his valet, by an offer of three crowns, to explore the interior, and he was probably the first European who ever accomplished the task. He was encountered at the narrow entrance by an immense flight of pigeons, at first mistaken for demons, who were terrified by his intrusion and hastened to make their escape. He reported that the cave measured forty paces in a straight line from the entrance and thirty on either side. Facing the entrance he noticed the lids of three sarcophagi upon the

[1] Now known as Inscription L. Not to be confounded with the L of Niebuhr.

ground, and to right and left were four tombs each six feet long.[1]

The general impression left upon his mind by the contemplation of Persepolis was that the ruins were the most magnificent he had ever seen.[2] Although not without fault, they are, taken as a whole, characterised by excellent taste and worthy of admiration for the amount of labour that lies concealed as well as for that which is displayed. He attributed the destruction of the building more to the religious zeal of the Mohamedans than to time. Istakhr early became the seat of a Viceroy of the Khalifs, and since then the work of demolition has never ceased. Even Shah Abbas adorned his palace at Ispahan with some of its marbles, and others found their way to Shiraz. Not long before Chardin's visit the governor of that place gave orders that sixty men should be employed in systematic destruction directed chiefly against the human figures; but fortunately his orders were not fully carried into execution.

The year after the appearance of Chardin's account of Persepolis Engelbert Kaempfer published his Travels, (1712) which include a description of the same monument.[3] He was a German physician who went to Persia iu 1684 in the capacity of secretary to the Swedish Envoy, and he subsequently remained as surgeon to the Dutch fleet stationed in the Persian Gulf. His visit to Persepolis occurred twelve years later than that of Chardin, but unfortunately he was not accompanied by a skilful artist (1686). He treats us to five drawings of Persepolis and three of Naksh-i-Rustam. The former include two general views of the Platform, one taken from the west and the other from the east: the Porch,

[1] *Ib.* pp. 343, 347–51. [2] *Ib.* p. 385.

[3] *Amoenitates Exoticae*, by Engelbert Kaempfer (1712), 297–353.

the sculptured stairs and the great door of the Hall of the Hundred Columns. They are quite unworthy to be compared either in design or execution with those of Chardin. But if it were not for the exceptional excellence of the latter, we should feel more grateful to Kaempfer and his successor Le Bruyn. As it is, Kaempfer's drawing of the sculptured stairs almost carries us back to the archaic period of art represented by Herbert, and may best be described as grotesque. He is more successful in the treatment of the façade of a tomb at Naksh-i-Rustam. He has, however, merits peculiar to himself. The first attempt to draw the platform to scale was made by Chardin; but Kaempfer improved upon this example by marking the position and outline of the principal ruins upon it; and has thus afforded the student invaluable assistance to guide him through the intricacies of all future descriptions. He has added to its clearness by numbering each of the ruins: a system he has also followed in his general view.

But of still greater importance was the attention he directed to the Inscriptions. It is to him we owe the designation of 'cuneiform' from the wedge-like appearance of the signs that compose the groups—a name they have since retained. He considered that the writing was ideographic, as in the Chinese; it was unknown elsewhere, but here it was found cut into the doors, windows, statues and walls, and it was certainly contemporary with the construction of the edifice. He was told that the hollow formed by the excision was formerly filled in with gold, which had been removed by the cupidity of subsequent ages, though he fancied he could still detect traces of it in some places. He was particularly struck by the appearance of an inscription on the south wall of the Terrace. It

occupied a slab no less than ten paces in length, and was divided into four tablets, each containing twenty-four lines. He copied the one on his right hand as carefully as the difficulties of the situation would permit; he was unfortunately prevented from copying the others, but he observed that the characters in them varied to a certain extent. The inscription he gave was afterwards known as the 'L of Niebuhr,' and belongs to the third or Babylonian system of writing.[1] He has transcribed the whole of the twenty-four lines, and it was by far the longest text that had ever yet been published to the world. Although the copy is defective when compared with the perfection that has since been achieved, yet as a first attempt upon so large a scale it deserves high commendation. He also gives the trilingual inscription round a window in the Palace of Darius, but in this he had been anticipated by Chardin.[2]

He is careful also to direct the reader's attention to the position of inscriptions in other parts of the ruins. He mentions the inscription over the animals in the Porch (of which, however, we had already heard from Chardin), but he also fixes the position of the inscription in twenty-four lines on the sculptured stairs;[3] of the three inscriptions on the south stairs of the Palace of Darius;[4] of the three inscriptions, each of six lines, over the bas-relief on the great doors of the same edifice,[5] and of the three inscriptions, each of four lines, in the corresponding position in the Palace of Xerxes.[6] Kaempfer favoured the opinion then most generally

[1] P. 332. The four inscriptions in Niebuhr are lettered H, I, K, and L. H and I are Persian; K is Susian; and L Babylonian. L is the H of Bezold, p. 39; Menant, p. 78. I is unilingual.

[2] P. 346. Chardin, Pl. 69, p. 320.

[3] Pp. 338, 339. A inscription.

[4] P. 348. C inscription.

[5] B inscription.

[6] P. 350. G inscription.

accepted that the building was a temple rather than a palace, and he considered that the columns were designed to support a roof.[1] He gives the earliest description we have of the central edifice, and he explains clearly the nature of the building. It consists, he says, of the remains of three massive doors and the bases of two columns and although these ruins are few in number he declares they are superb.[2]

He remarked that two months would be scarcely long enough to sketch the principal objects, and he could only spare three days.

Nearly twenty years later the ruins were visited by another traveller who had more time at his disposal. Corneille le Bruyn arrived early in November 1704 and occupied himself for three months in sketching and measuring the various edifices.[3] Unfortunately, the result is scarcely equal to the effort. His book, which was published at Amsterdam in 1718, contains eight plates of Persepolis; but they are greatly inferior to those of Chardin and are executed on too small a scale to assist the student in following the diffuse and confused description given in the text. Two plates are devoted to four general views taken from different points. In these the buildings are indicated by letters, which refer the reader to the text, and they enable him to apprehend some of the more obscure statements made by the writer. One plate is devoted to views of the great stairs and entrance portico. Two others reproduce the figures on the sculptured stairs. Though inferior to the same views given by Chardin, they are immeasurably superior to the one by Kaempfer and fall little short of those subsequently executed by Niebuhr. The remaining plates contain a number of small

[1] P. 334. [2] P. 349.

[3] *Voyages de Corneille Le Bruyn* (Paris, 1725), iv. 301–408.

vignettes, which convey but a poor impression of the objects they are designed to represent. Le Bruyn has, however, devoted one of the plates to Inscriptions and this is the most important work he has achieved in connection with this subject. He has copied five separate inscriptions, four of which were now published for the first time. (1) The Inscription on the Sculptured Stairs.[1] (2) The Inscription on the pilaster in the Portico of the Palace of Darius.[2] It is in three tablets, each tablet containing from thirteen to fifteen lines. (3) The Inscription seen over the King in the same palace.[3] It is also in three tablets, each containing six lines. (4) The Inscription in the folds of the royal robe—of which seven lines are given.[4] (5) Finally, he has reproduced the window Inscription already published by Chardin and Kaempfer, but instead of representing it as it occurs round a window, he has placed the three lines under one another in parallel lines.[5] By this simple change of position he has shown the fallacy of the theory that the lines at the sides may be read from top to bottom: or that the wedge can occur with the point upwards. Le Bruyn is a more accurate copyist than Kaempfer, and in some respects he even excels Ouseley, a hundred years later. With Le Bruyn the cuneiforms assume the bold and regular appearance with which we are now familiar, although he confuses many of the letters by too great compression.

Le Bruyn appears to have been one of the first travellers to attempt to make a collection of these antiquities to send home to Europe. The extreme hardness

[1] A inscription, Table 126 (Le Bruyn).
[2] C^a inscription, Table 131 (Le Bruyn).
[3] B inscription, Table 132 (Le Bruyn).
[4] G inscription, Table 133 (Le Bruyn).
[5] L inscription, Table 134 (Le Bruyn).

of the stone severely taxed the strength of his tools, and it was with considerable difficulty that he secured a piece from a window covered with cuneiform characters, and some other smaller objects. These he despatched through the agent of the Dutch East India Company to the Burgomaster of Amsterdam. So far as we know, the only other specimens of cuneiforms that had hitherto been seen in Europe were those picked up by Della Valle on the site of Babylon and sent to the Kircherian Museum.

He was not very happy in some of his criticisms. He described the animals on the Entrance Portico as having a likeness to the Sphinx with the body of a horse and the feet of a lion. He imagined that the animal attacked by the lion on the sculptured stairs was a horse or even an ass. The object that separates the various groups in the same place he describes as a vase. He considered the capital surmounting the columns was the figure of a kneeling camel. He is about the only competent observer, with the exception of Niebuhr, who discerned female figures among the sculptures.[1] He appears to say that there are no less than forty-six of these in the Palace of Darius alone : among them are the King's attendants bearing the fly-chaser and parasol. He estimates the total of human figures among the ruins at 1300 ; and, judging by the number of bases, he considered there were originally not less than two hundred and five columns.[2] He gives the measurements of the buildings, the size and number of the figures with a detail that becomes irksome and bewildering. The reader often regrets that he did not make better use of his pen and pencil, and spare him some of the

[1] *Ib.* pp. 317, 351. Buckingham also fancied he beheld a female in the Palace of Xerxes.

[2] *Ib.* pp. 353–4.

results of the measuring tape. He is by no means too lavish of his praise. He censured the figures as stiff and devoid of animation; the nude he found represented without anatomical skill and the draperies without taste. He admits, however, that the ornamentations, when they occur, are beautiful. He was of opinion that all the stone for the construction of the various edifices came from the neighbouring mountains, where he observed all the various shades found at Persepolis. He had the good sense to reject the foolish theory supported by Chardin as to the Jamshid origin of the ruins; and he could see no evidence that they had ever been used as a temple. On the contrary, he considered that they had been a palace, and his conviction that the columns had originally supported a roof lessens the difficulty of accepting that view. He argues with some force and great diffuseness that it could only have been the Palace of the Achaemenides destroyed by Alexander: an opinion confirmed by later investigation, and one that greatly facilitated the attempt made by Grotefend to decipher the inscriptions.

CHAPTER II

NIEBUHR TO DE MORGAN. A.D. 1765—1897

It was more than sixty years before any farther contribution was made to the knowledge of Persepolis. In 1761, however, the King of Denmark, Frederic V., fitted out an expedition chiefly for the purpose of exploring Arabia. Five commissioners were nominated, to each of whom a special branch of inquiry was assigned. Among them was Carston Niebuhr, the father of the writer whose historical works agitated the early part of last century. They left Copenhagen in January of that year, and reached Constantinople after an adventurous voyage. From thence they went to Egypt, and finally to Yeman, where they arrived in 1763. Here three out of the five explorers died, and the two survivors left for Bombay in 1764. Soon afterwards another died, and Niebuhr, the sole survivor, determined to return home, and to take Persia and the Euphrates Valley on his way. He received many courtesies from the English merchants settled at Bushire and Shiraz, especially from Mr. Hercules, the agent of the East India Company, in whose house he lived at Shiraz. Through his influence Niebuhr went on to Persepolis, furnished with the best introductions to the chiefs of the neighbouring villages. He arrived on the 13th of March, 1765, and remained till the 3rd of April. He afterwards returned for two days to compare his

sketches with the original. He wrote in German, and the French translation appeared in 1780.[1]

The magnificent views of Persepolis given to the world by Chardin, and the very useful plan drawn to scale by Kaempfer, had already afforded ample material for forming a tolerably accurate conception of the general aspect of the ruins. Little remained now to be done except to work for the archæologist, to whom the minutest attention to detail was the first necessity. Niebuhr, unfortunately, cannot claim to have accomplished this difficult task, so far at least as his drawings are concerned. He has, however, contributed ten plates of illustrations of considerable artistic merit. Following the example of Kaempfer, he begins with a ground plan on which the various edifices are distinctly indicated by letters. This is followed by a general view looking towards the west; three plates are devoted to the sculptured stairs; one to the mysterious animals on the porch that continued so long a stumbling-block; the Palaces of Darius and Xerxes each occupy a plate, and two others portray the seated figures in the Hall of the Hundred Columns. He was so satisfied with this achievement that he thought even the student would have no need of any farther assistance from the artist's pencil.[2] This is, however, so far from the case, that even the general reader has some cause to complain.[3] Niebuhr has conveyed an entirely false conception of the appearance

[1] *Voyage en Arabie*, par C. Niebuhr (Amsterdam, 1783), vol. ii. pp. 98–133.

[2] Vol. ii. p. 122.

[3] Morier observes: 'On comparing Le Bruyn's, Chardin's and Niebuhr's drawings with the sculptures, I found them in general correct in outline, but imperfect in the details of dress, arms, &c. . . . They have not been done justice to in the works of those travellers.'—*Second Journey through Persia* (London, 1818), p. 76.

of the sculptured terrace by the omission of the broken line of sculpture, of which one half still remains above the other two. He has also had the temerity to represent the figures as though they were perfect, though he states in the text that the larger number on one side are so mutilated that they are without their heads.[1] It would be impossible in his drawings to distinguish the different nationalities; it is difficult even to detect the 'Kaffir,' as he calls the famed Ethiopian.[2]

On the other hand, the description he has given of the ruins has the merit of being more concise than that of Chardin, and we follow him throughout with clearness. He was disposed to accept the theory that the edifice was originally a temple, the seat of an ecclesiastical chief, comparable to the Roman Pontiff, who had gradually passed into a secular prince. He did not doubt that it finally became the residence of the Achaemenian Kings, and was the edifice destroyed by Alexander.

It is not necessary to refer to many of his criticisms. He had little hesitation in deciding that the animals on the Porch were griffins (licornes), and that a double griffin ornamented the capital of the columns. Besides griffins, he fancied he discerned women among the bas-reliefs, especially in the Palace of Xerxes.[3] He, however, made the important observation that in the Columnar Edifice or Hall of Xerxes the columns of the central cluster are four feet lower than those at the

[1] Morier says Le Bruyn has exaggerated the mutilation. *A Journey through Persia*, by James Morier (London, 1812; referred to as *First Journey*), p. 134. Elsewhere he says the faces of *all* the figures to the right are mutilated; *Second Journey*, p. 76.

[2] In Porter's drawing this personage appears at the other end of the row. *Cf.* Plates, Niebuhr, ii. 120, and Porter, *Travels in Georgia*, i. 670.

[3] Niebuhr, ii. 117.

side, and that there are the remains of four walls that seem to indicate an entrance from the north. He did not consider that the evidence was sufficient to conclude, as was generally done, that this edifice must have been necessarily open at the top; on the contrary, he suggests the possibility that the central group of columns supported a second stage, and the side colonnades a terrace.[1] He thought it probable that the whole assemblage of columns—seventy-two in number—had originally formed one immense building, which would have exceeded in size the Hall of the Hundred Columns. With regard to the latter, he had no doubt that it also had been roofed, and he observed numerous fragments of columns both in the great hall and in the portico. Della Valle had long ago traced the bases of thirty-six columns in the Palace of Xerxes; Niebuhr now adds the observation that there are four in each of the side rooms. He was also the first to observe the third tomb to the south of the others near Persepolis that has been left incomplete.[2]

But his principal merit lies in the great service he has rendered towards the solution of the mystery of the cuneiform letters. It is true he neglected to furnish a complete copy of all the inscriptions, which, with the time at his disposal, he might perhaps have accomplished; but the contributions he did make are of great value.

(1) He copied the inscription on the west end of the sculptured terrace, 25 lines, known as Inscription A.

(2) The six-line inscription in three tablets over the king in the Palace of Darius: B, C, D.

(3) The corresponding inscription in the Palace of Xerxes: E, F, G.

[1] Niebuhr, *ib.* p. 111. [2] P. 125.

(4) He also copied the large inscriptions in four tablets on the outside south wall of the platform: H, I, K, and L. They each fill twenty-four lines, and an idea of the size of the letters may be formed from the fact that the original covers a space twenty-six feet long by six feet high.

Of these Le Bruyn had already copied the A inscription in the drawing he gives of the stairs, the six-line inscription of Darius (B, C, D), and a line of the inscription of Xerxes from the royal robe; while Kaempfer copied one tablet (L) of the inscription on the south terrace.[1] The others now appear for the first time. It has already been observed that Kaempfer was the first to draw the characters with a bold and steady hand; in this he has been followed by Niebuhr, so that his copies differ in no respect from those produced in the present day. The few remarks he has made upon the subject are of peculiar value and very materially assisted later scholars. He was the first to observe that the inscriptions are written in three different 'alphabets,' and that these always recurred together.[2] So slow is the progress of discovery, however, that he never seems to have advanced to what might appear to be the obvious conclusion that the three tablets are repetitions of the same text in different languages. He noted that the 'alphabet' in one of the tablets of the series was comparatively simple, and consisted of no more than forty-two different signs.[3] These he copied out, and they appear in Plate 23. He thus limited the first step in decipherment to the interpretation of a comparatively small number of signs. Till then the greatest confusion was produced by the appearance of detached portions of inscriptions, selected indifferently

[1] *Supra*, pp. 71, 73.

[2] Niebuhr, *ib.* p. 112.

[3] *Ib.* p. 113.

from all the three kinds of writing, a process that inspired the fear that the number of signs to be mastered was practically unlimited. Having clearly detected each separate letter from among the number of confused signs in a line of inscription, he farther assisted the student by marking off each separate letter by a full stop or colon in the copies he made of the inscriptions themselves.[1] From the division of the signs into letters he does not seem to have made the next step and apprehended the division of the lines into words by the diagonal wedges in the Persian column. He, however, directed attention to two different copies of the same inscription, where in one the letters that end the third line are in the other the first that occur in the fourth line; he pointed out that this practically settled the direction in which the writing should be read.[2] He also showed that the lines supposed by Chardin to be written from top to bottom are not in reality upright, but should be placed on their side, and when horizontal the letters correspond to those already known.[3]

Before leaving the neighbourhood of Persepolis, Niebuhr visited Istakhr and Naksh-i-Rustam, but he did not go on to Murgab. At Istakhr he saw two columns still standing, and he noted the massive blocks of the

[1] This, as we have noticed, had been already done by Flower.

[2] P. 117. Professor Sayce makes the obvious remark that another easy way of settling this point is the consideration 'that the ends of all the lines were exactly underneath each other on the left side, whereas they terminated irregularly on the right.' *Fresh Lights from the Monuments*, by A. H. Sayce (1890), p. 10.

[3] 'Quelques voyageurs en ont tiré la conséquence que les anciens Perses ayent écrit de haut en bas, commes les Chinois. Mais si l'on examine de plus près les inscriptions, comme quelques uns les ont copiées icy, et qu'on les compare avec mes copies, on trouvera que les lignes qui sont droites sont toutes couchées de côté, ce qui fait que le nombre des lettres n'est à beaucoup près pas si grand que peut-être on a pu le penser d'après les copies de mes prédécesseurs.' Niebuhr, *ib.* p. 113.

gateway.[1] He made no attempt to enter any of the tombs, which he says could not be done 'without the risk of losing one's life.' That risk, such as it was, was, however, undertaken in the following year by Mr. Hercules, who had provided himself with tools in the case of necessity; but he found that some earlier visitor had pierced a hole through the top, and that there was nothing but dust remaining. Niebuhr has not noticed the inscription on the Tomb of Darius; but his accurate copies of the Pehlevi made at this spot and at Naksh-i-Rejeb opposite were the first that enabled Silvestre de Sacy to translate that language.

We shall see in a future chapter that before the close of the century the writings of Le Bruyn and Niebuhr had attracted a fair share of attention among European scholars; and the copies they had made of the inscriptions became the object of sedulous study, especially in the North. In Göttingen, the interest excited by the description of the ruins of Persepolis gave rise to an extremely heated controversy between Heeren and Herder. The former, in an early edition of the 'Historical Researches,' maintained that they were of Achaemenian origin. Persepolis, he says, 'as the residence and place of sepulture of the Persian kings, was considered in the light of a sanctuary, and held to be the chief place in the kingdom.' Herder, on the other hand, contended for its Jamshid origin, and supported his opinion in a series of very acrid 'Persepolitan Letters.'[2] The question was of more importance than might at first sight appear, for upon its decision depended the royal names that should be looked for in the inscriptions. George Grotefend, a student in the University, who made the first successful attempt to

[1] P. 126. Morier saw only one column. *First Journey*, p. 141.

[2] Heeren, *Historical Researches* (Eng. ed. 1846), vol. ii. Appendix VI.

decipher them in 1802, adopted the opinion of Heeren, and his investigations were largely based upon the conviction that the names of Darius and Xerxes could not fail to be found hidden in the cuneiform characters.

Meanwhile the new century opened with a continuance of the explorations, and one of the most fruitful discoveries was the inscription of Cyrus found by Morier at Murgab. For some time previous the disturbed state of the country had led to a complete suspension of diplomatic relations between Persia and European countries. Foreigners, who had been so cordially welcomed by Shah Abbas became almost unknown. Englishmen were gazed upon in the streets of the capital as 'monsters of an unknown genus,' and thought to be Chinese.[1] At length Captain (afterwards Sir John) Malcolm was sent by the Indian Government to solicit an alliance for common action against the Afghans. The French, however, viewed this friendly alliance with jealousy, and in 1805 they sent M. Jaubert, a well-known Orientalist, to detach the Shah from the English alliance.[2] The French envoy was successful; a Persian mission visited France, and concluded a treaty with Napoleon, in May 1807; an embassy under General Gardanne followed. These intrigues were, however, immediately met by a special mission from England, headed by Sir Harford Jones; and James Morier was appointed secretary. Morier was descended from a Huguenot family who, after leaving France, settled first in Switzerland and afterwards in Smyrna, where they engaged in business. Here James was born, about 1780. Not long after, his father came to England, became a naturalised subject, and sent his sons to Harrow. A reverse of fortune

[1] Morier, *Second Journey*, p. 264.

[2] For his fate see Flandin, *Voyage en Perse*, i. 113.

compelled him to return to Smyrna, where James again resided till about 1800. His father was appointed Consul at Constantinople in 1804, and died there of the plague in 1817. He had, however, the good fortune to secure appointments for three of his sons in the diplomatic service, and a commission in the navy for a fourth. Morier reached Bushire at the end of 1808, but upon this occasion he only spent a few months in the country. He returned in 1810, once more filling the position of secretary to an embassy of which Sir Gore Ouseley was chief. Ouseley brought his brother William with him in the capacity of private secretary and Mr. Gordon, a brother of Lord Aberdeen, was also attached to the mission. While the party was detained at Shiraz, in 1811, they scattered in pursuit of archæological discovery. Morier revisited Persepolis; Sir W. Ouseley went to Fasa, which was then considered to be the ancient Pasargadae; while Gordon undertook the dangerous journey to Susa.[1] Morier remained in Persia for six years, devoting himself to study; and he has secured a lasting fame as author of 'Hajji Baba.' Upon the occasion of his first visit in 1809, he spent only two days at Persepolis, and he added nothing to the knowledge already existing with reference to it. He, however, went to Naksh-i-Rustam, and his friend Captain Sutherland succeeded, as Mr. Hercules had done before, in entering the tomb farthest to the left.[2] He afterwards continued his journey along the valley of the Polvar, 'between mountains whose brown and arid sides presented nothing to cheer or enliven the way.' When he had travelled, as he supposed, about forty miles, and was still

[1] *Second Journey*, p. 68.

[2] *First Journey*, p. 128. On Persepolis and Murgab see chaps. vii. and viii.

some two miles from Murgab, he turned from the direct route to view the ruins known in the country as 'Mesjid Madre Suleiman,' or Tomb of the Mother of Solomon. He observed the three pilasters of what is now termed the Palace of Cyrus, and conjectured at once that they belonged to a Hall, 'the interior of which was decorated with columns.' They were surmounted by a short inscription, of which he made a copy. He next observed a 'building of a form so extraordinary that the people of the country often call it the court of the deevis or devil.' He gives an excellent drawing of the well-known tomb, and adds: 'if the position of the place had corresponded with the site of Passagardae as well as the form of this structure accords with the description of the Tomb of Cyrus, I should have been tempted to assign to the present building so illustrious an origin.' He shows that the plain in which it stands was once the site of a great city, 'as is proved by the ruins with which it is strewed'; the cuneiform inscriptions indicate that it was of the same 'general antiquity' as Persepolis; the two structures correspond in description, and in fact the only evidence on the other side is the absence of the inscription which Aristobulus declares he saw upon it. The place had been visited twice before, once by Barbaro in the fifteenth century, and again by Mandelslo in 1638. Mandelslo, indeed, gives an admirable drawing of it, which later artists have scarcely excelled. But till it was seen by the imaginative Morier no one had suggested that it was the Tomb of Cyrus. The opinion was readily accepted by Grotefend,[1] and it guided him to no small extent in the decipherment of the name of Cyrus in the inscription

[1] Ouseley (Sir W.), *Travels in various Countries* (3 vols. 1821), vol. ii. note p. 439.

brought from the immediate vicinity.[1] When, however, Morier paid his second visit to Murgab in 1811, he was so overawed by the ponderous learning of his travelling companion Ouseley, that he tacitly allowed the subject to drop. On this occasion he succeeded in gaining access to the interior, but found nothing worthy of mention. He also noticed for the first time a very remarkable bas-relief of a winged human figure, and over it a repetition of the inscription he had already copied.[2]

Kaempfer had set the example of collecting specimens, and we fear the gentlemen of the embassy were only too ready to follow in his steps. They even went so far as to bring stone-cutters with them, provided with the requisite tools to carry their design into effect. We afterwards hear rather ominously of 'the specimens in the possession of Sir Gore Ouseley and Lord Aberdeen.'[3] Morier published in 1812 the account of his 'First Journey,' containing the famous Cyrus inscription, and in 1818 the account of his 'Second Journey' followed. These works were well received, and can

[1] Inscription M.

[2] *Second Journey*, p. 117.

[3] *Second Journey*, p. 75; Ouseley, ii. 255. They were afterwards given to the British Museum, and for a long time were the only materials for the study of Persian art. The practice of taking away specimens seems to have been continued by later travellers, and, as Porter says, much of value was 'doomed to the predatory mallet' (p. 632). When Rich visited the ruins in 1821, he observed that 'many parts had been defaced by the passion for preserving curiosities. This rage has induced some even to chip off bits of inscriptions. One has endeavoured to chisel off a very fine head, which was well preserved, and, not succeeding, he has apparently in wrath thrown his mallet against the head and smashed it.' (*Koordistan*, ii. 222.) Rich found the inscription on the robe of the king in the Palace of Xerxes had suffered from these proceedings. 'They have been variously defaced by people chipping off pieces (mostly very recently) for curiosities. I have copied what remains of three of them' (*Babylon and Persepolis*, Pl. 19). A disease visited the people of the country shortly after, and those of them who had assisted in these acts of Vandalism thought themselves justly punished. Flandin, ii. 113, 127.

still be read with interest, but the fame of the author rests on his 'Hajji Baba,' which appeared in 1824.

Ouseley, who accompanied the embassy, was a very learned Orientalist, who was perhaps somewhat oppressed by the weight of his own accomplishments.[1] He was born in Ireland, in 1771, and after serving for a time in the army, he retired in 1794, and devoted himself wholly to his favourite pursuits. He became a thorough Persian scholar, and the author of many books bearing on Persian history and antiquities. He was therefore well qualified to accompany the embassy, and it was a source of keen pleasure to him to visit the country under such advantageous circumstances.

We have said that he turned aside from Shiraz to visit Fasa or Pasa, in the hope of finding the tomb of Cyrus; but, like Della Valle, he discovered nothing except a venerable cypress tree, which 'is said to have been for above one thousand years the boast and ornament of the place.'[2] He finally came to the conclusion that Pasargadae and Persepolis were one and the same place, and firmly opposed the claim put forward by Morier on behalf of Murgab. Ouseley seems to have spent five days in all among the ruins of Persepolis, and he made excellent use of his time. He added another to the increasing number of general views (Pl. 40), and contributed a few small sketches of various parts of the building (Pl. 41). He rendered considerable service by the accurate copy he made of the cuneiform inscription round the window frames of the Palace of Darius. He found it repeated no less than eighteen times, and by a careful collation he was able to present a complete reading of the mutilated text.[3]

[1] Ouseley (Sir W.), *Travels*, vol. ii. For Persepolis and Murgab see chaps. xi. and xii.

[2] Ouseley, ii. 91.

[3] Plates 41 and 47, pp. 256–7.

He finally dispelled the erroneous idea that it was to be read from the top downwards; and he pointed out that certain of the characters found on bricks and gems from Babylon are never to be seen at Persepolis.[1] His description of the ruins is painstaking, but the subject was now almost exhausted. He agrees with Niebuhr that the Hall of Xerxes was roofed, and also that it may have supported another stage. He went farther and suggested the comparison with the façade of the tombs, an idea which Fergusson afterwards turned to excellent account.[2] But the chief value of his narrative consists in the full account he gives of Murgab and the illustrations that accompany it. Mandelslo and Morier had, as we have seen, both sketched the tomb; Ouseley adds a third sketch and by no means the best; but his other drawings are quite new, and from them the reader gains his first impressions of the plain of Murgab. They afford excellent views of the principal remains—the terrace, the square building, the palace, the caravansary, and the winged figure. He gives a satisfactory account of each, and when he comes to the palace, we find it described simply as 'a cluster of pillars and pilasters.' Notwithstanding all his prepossessions, he could not fail to be struck by the strange likeness of the Murgab tomb to the description given of the tomb of Cyrus, and he adds: 'I should not have hesitated to believe it the tomb of Cyrus had the discovery of it rewarded my researches in the vicinity of Pasa or Fasa, or if, as Mr. Morier says, its position had corresponded with the site of Passagardae.' As it was, he even ventured to express the opinion that it was a building of 'doubtful antiquity.'[3] He visited it just an hour after Morier had made his sacrilegious entry; the startled female custodian had meanwhile

[1] Ouseley, p. 286. [2] *Ib.* pp. 265–7. [3] Pp. 426–9.

returned, locked up the sacred shrine, and fled; so he was unable to satisfy his curiosity by a near inspection. He copied the Cyrus inscription from a solitary monolith to the north of the palace, and there were thus three independent versions of the same inscription taken from three different parts of the ruins.[1] The copy made by Ouseley was sent to the Director of the Imperial Library at St. Petersburg and through him it fell under the notice of Grotefend. Ouseley succeeded in making a magnificent collection of Persian manuscripts, especially relating to history and geography. His later years were spent in France, and he died at Boulogne, in 1842.[2]

Two hundred years had now elapsed since Gouvea called attention to the ruins of Persepolis. A considerable amount of literature had accumulated on the subject, and large numbers of plans and drawings of the principal objects were taken, which materially assisted the student. On looking back over these, however, it was curious to observe how widely the descriptions differed from each other, and how irreconcilable were the various views of the same monument. The explanation was not far to seek. Most of the travellers could only spare a few days from more pressing occupations to devote to the work. They were afterwards compelled to complete from memory the hasty sketches they had made on the spot, and although many of them display considerable skill in the use of their pencil, only a few had any professional knowledge of drawing. They were, moreover, all alike at the mercy of the engraver, and some

[1] Plate 49: 1. Morier, from a pillar of the palace. 2. Gordon (and Morier), from over the winged figure. 3. Ouseley, from the solitary monolith.

[2] Mohl, *Rapports annuels faits à la Société Asiatique, 1840–45*: 1843, p. 13.

thought they had good reason to complain of the treatment they received at his hands. But there was another cause that led to inevitable discrepancies. Few of them aimed to produce the minute accuracy of a photograph, or could resist the temptation of idealising the work before them: on the one hand, Le Bruyn exaggerated the ruin wrought by time; on the other, Niebuhr repaired its ravages. According to the one, the sculptured staircase is a confused mass of mutilated figures; according to the other, it appears as perfect as when first completed by the sculptor. Nor was it only in the drawings that inaccuracies were to be detected. The measuring tape itself seemed to yield different results in different hands. It was impossible to find agreement even as to the number of steps in the great staircase. According to one, there were only ninety-five (Herbert); according to another, one hundred and thirteen (Kaempfer); and other accounts ranged between these two extremes.

It was with the professed object of giving a final and authoritative representation that would satisfy the curiosity of the minute student that Sir Robert Ker Porter undertook to go over the old ground once more. He was an acccomplished artist and he consequently possessed qualifications many of his predecessors were without. He arrived at Murgab on June 12, 1818, and left Persepolis on July 1, so that he was not more than eighteen days engaged in the study of the numerous antiquities in the neighbourhood. At the conclusion of his stay, he congratulates himself upon finding that: 'I had drawn nearly every bas-relief of consequence, had taken a faithful plan of the place, and copied several of the cuneiform inscriptions.' [1]

[1] Porter (Sir Robert Ker), *Travels in Georgia*, &c. (London, 1821), i. 679.

His industry during the time must certainly have been extraordinary. He surveyed the sites of Murgab and Persepolis, and made two ground-plans of both places. The former was now made for the first time, but the latter had been taken as early as the days of Kaempfer. He took two drawings of Murgab, four of the Achaemenian remains at Naksh-i-Rustam, six of the Sassanian sculptures, and two of the same period at Naksh-i-Rejeb. In addition to this he made twenty-four drawings of the monuments of Persepolis—some of them upon a large scale—and copied inscriptions that occupy four plates : that is to say, he accomplished in eighteen days work that now fills forty-two plates of engravings. This is certainly wonderful, but if he had executed less than one-quarter, the result would perhaps have been more satisfactory. In addition to the drawings, he measured the various buildings and the more important objects in each ; and took notes for his very elaborate description of the dress, the arms, and other minute details of the various figures in the numerous bas-reliefs. Herbert had long ago expressed the opinion that 'a ready Lymmer in three moneths space can hardly (to do it well) depict out all her excellences,' and certainly the twelve days (from June 22 to July 1), which were all that Porter actually spent at Persepolis, were wholly inadequate for the purpose. In looking through Porter's drawings, we find indeed ample evidence of haste, and of the absence of that minute accuracy which it was his special object to achieve. Yet his book is still perhaps the best that exists upon the subject in English. The drawings of his competitors are certainly not more accurate, and his careful and minute descriptions are quite unrivalled. His merit lies in the thorough investigations he made upon the ground itself, in the

painstaking and, upon the whole, accurate measurements he took of each monument, and in the clear and explanatory account he has given of the various subjects depicted on the bas-reliefs. The care with which his investigations were made was rewarded by the discovery of the remains of the second edifice at Murgab, which had escaped the notice of Morier and Ouseley. His visit to Naksh-i-Rustam resulted in the earliest drawings we possess upon an adequate scale of the façade of a tomb, and it was completed by a ground plan of the interior.[1] He expressed his conviction that the third tomb with the long cuneiform inscription was in all probability that of Darius, an opinion afterwards proved to be correct.[2] The long debate as to the nature of the enigmatical animals on the Great Porch at Persepolis was still undecided. Even Mr. Morier adhered to the notion that they were horses, but Porter's keen eye at once identified them with the bull, which subsequent discoveries at Nineveh has confirmed.[3] He also showed that the capital of the columns was composed of two half bulls, but he does not seem to have recorded that they are elsewhere varied by half griffins.[4]

Porter had no doubt that the Takht-i-Jamshid represented the ruins of the palaces of Persepolis, although the subject had not yet passed beyond the region of controversy. He inclines, however, to the compromise favoured by Niebuhr, and dwells upon the pontifical

[1] Plates 17 and 18, pp. 516, 518. See the curious engraving of a Royal tomb at Persepolis in Hyde, p. 307, where he says the soul or Icuncula is about to ascend to heaven.

[2] Porter, p. 524.

[3] *Ib.* p. 587. D'Hancarville had, however, already suggested that they were 'partly bulls.' See the various opinions on this question stated by Ouseley, ii. 247, note.

[4] Porter, p. 634.

character of the sovereign, especially after the death of Zoroaster, when, he says, Darius assumed the title of Archimagus. He accepted Morier's suggestion that Murgab was the site of Pasargadae and its principal monument the tomb of Cyrus.[1] He had a thorough belief in the decipherment of Grotefend. He not only accepted his recognition of the names of Darius and Xerxes, but he followed him when he traced their descent from Jamshid. That hero was, he thought, none other than Shem, whom sacred writ planted in that very region of Persia, and possibly Persepolis bore his name from the very earliest ages.[2] Porter did not himself advance our knowledge of the inscriptions. He copied the inscription at Murgab, but that had been previously done by Morier and Ouseley, and, as he candidly remarks, he 'found that we all differed in some of the lines from each other.'[3] He also copied a portion of the inscription (A) on the sculptured staircase, of which Niebuhr had already given a satisfactory rendering;[4] and finally he took the trouble to execute an extremely imperfect copy of the four tablets of inscriptions on the south wall, which had also been much better done by Niebuhr.[5]

Notwithstanding its many defects, his book continued for thirty years to be the chief authority on the subject.[6] Heeren popularised the general result in the

[1] Porter, p. 502. [2] *Ib.* pp. 622–3. [3] *Ib.* p. 488–9, Plate 13.

[4] Pl. 44, p. 616. He omits the first four lines.

[5] Pl. 55 and 56, p. 681. *Cf.* Niebuhr, Pl. 31. Porter left out lines 18 and 19 of Inscription H. Westergaard, *Ueber die Keilinschriften* (Bonn, 1845), p. 2.

[6] Porter's *Travels* were published in 1821, the same year as Ouseley's, and three years after Morier's *Second Journey*, 1818. Loftus complains of the 'exceedingly rough and incorrect sketch' made by Porter of a bas-relief at Susa: *Chaldæa and Susiana*, p. 415. Yet Flandin admits Porter's talent in drawing. The plates of all his predecessors were, he says, superseded. He became the 'oracle of the archæologists,' especially in architecture and

fourth edition of his 'Researches' (1824), and it thus became equally well known to German readers. Texier complained, in 1842, that there was absolutely no book in French upon the subject, and he had to refer to Porter for his information.[1] It was not till after the publication of the elaborate works of Texier and Flandin, which did not appear till 1849–51, that Porter was in any way superseded. Even then the form in which the great French authorities are published has rendered them inaccessible except to students in a great public library. The general reader would have remained in complete ignorance of the results but for the opportune publication, in 1851, of Fergusson on the 'Palaces of Persepolis,' and Vaux on 'Nineveh and Persepolis.'

Within this long period, the area of discovery widened. Hamadan was identified with Ecbatana by D'Anville and Rennell, and it soon became an object of curiosity. The city stands 6,000 feet above the level of the sea, in a plain at the foot of Mount Elvend (the Orontes), and is surrounded by vineyards, orchards and gardens. Morier visited it in 1813, and discovered in the outskirts of the city a base of a small column of the identical order found at Persepolis, and near it he observed a large irregular terrace, perhaps the foundation of the Palace. Rawlinson afterwards detected five or six other bases of the same type. Three years before Morier's visit, Kinneir had observed an inscription some seven miles distant, carved on the surface of the rock on a steep declivity of Mount Elvend.[2] 'It consists,' says

sculpture (Flandin, i. 9). The most important contribution since made in English is the chapter on the subject in Lord Curzon's *Persia*, Vol. II. chap. xxi.

[1] Texier (Ch. F. M.), *Description de l'Arménie* (1842–52), i. xv.

[2] Kinneir (J. Macdonald), *Geographical Memoir* (1813), p. 126. Flandin estimates the distance at eight kilomètres. See Menant, *Les Achéménides*,

Morier, 'of two tablets, each divided into three longitudinal compartments, inscribed with the arrow-headed character of Persepolis. These inscriptions are called by the Persians Genj-nameh, or 'Tales of a Treasure.'[1] When Porter passed through Hamadan, he also went in search of the mysterious stone which he heard bore unintelligible writing. After a fruitless ascent of one of the highest peaks of Mount Elvend, he was fortunate enough in the course of his descent to come across the object of his expedition. The stone, he says, consists of 'an immense block of red granite of fine texture,' and the inscription is in excellent preservation. The natives believe that whoever succeeds in deciphering it will find a key that will enable him to discover a large treasure in the mountain, and hence the name they give it. Porter only reached it when the day was far advanced, and he had not time to make a copy.[2] Bellino, of whom we shall hear later, made another attempt, in 1820, but unfortunately he was attacked by fever at Hamadan, and died without accomplishing his object.[3] At length Mr. Stewart and M. Vidal, the consular dragoman at Aleppo, obtained copies about 1827, and communicated them to M. Schulz, who was then at Van. Professor Schulz of Hesse had been commissoned by the French Foreign Minister to undertake a scientific journey to the East, and he reached Van in July 1827, where he made copies of no less than forty-two cuneiform inscriptions. Long afterwards they were found to be written chiefly in the old Armenian language; but one was in the three varieties adopted by the Achaemenian kings. It was engraved on a large square tablet escarped on the precipitous

p. 129. Murray says vaguely, 'near' Hamadan (Handbook, *Asia Minor*, p. 328). Curzon uses the same expression (i. 566).

[1] Morier, *Second Journey*, p. 267.

[2] Porter, ii. 120.

[3] Rich (C. J.), *Narrative of a Residence in Koordistan*, ii. 126.

face of the rock about sixty feet above the ground. It was divided into three columns, each column consisting of twenty-seven lines. Unfortunately, Schulz was murdered in 1829, and his papers ultimately found their way into the hands of M. Lajard of Paris, by whom they were sent to M. St. Martin for publication.[1] St. Martin, as we shall see, had early busied himself with cuneiform inscriptions, but in consequence of his early death, the papers of Schulz fell into the possession of the very eminent Orientalist Burnouf, by whom they were used with singular ability. The inscriptions found at Mount Elvend and at Van[2] became the subject of his 'Mémoire sur deux Inscriptions,' which appeared in 1836, and which marked the first great advance in cuneiform decipherment that had taken place since the memorable effort of Grotefend thirty-four years before.

Till the publication of Burnouf's essay in 1836, the task of decipherment had made but small progress, and so far as we are aware, no copy of a Persian inscription had yet been published that had been taken by anyone with the smallest knowledge of the meaning of the characters. Mr. Rich, the British Resident at Bagdad, was, however, a zealous student of Grotefend, and in constant correspondence with him. He kept him supplied with copies of the few inscriptions that were then brought to light from the ruined mounds of Mosul and Hillah. His German secretary Bellino, who was also much interested in cuneiform discoveries, generally acted as the medium of communication; and Grotefend's later pamphlets are full of recognition of the services he had received from both scholars. Rich was a man of very unusual attainments.[3] When still

[1] Vaux (W. S. W.), *Nineveh and Persepolis* (London, 1851), p. 441, note A. *J. R. A. S.* (1882), vol. xiv., article on Van by Professor Sayce.

[2] Elvend, O and F; Van, K. [3] Rich, *Koordistan*, i. xvi, xviii.

quite a boy, he mastered several Oriental languages, and in later years, amid the pressure of official life he never lost his interest in these subjects. He collected large numbers of Oriental manuscripts, and his mind was filled with the lore they contained. His house at Bagdad became the rendezvous of all the more eminent travellers who passed that way in the early years of the century. His hospitality acquired a reputation not inferior to that of Père Raphael at Ispahan during the latter half of the sixteenth century. Rich was equally ready to place his vast stores of Oriental knowledge at the disposal of his guests, and his official position enabled him to afford them substantial assistance. It was peculiarly fortunate that so eminent a man should have held that office at a time when public interest was first awakened to the archæology of the ancient cities of the East. He was himself able to render important services in this field of inquiry, and he made a collection of antiquities, afterwards acquired by the British Museum, which, though limited, as it is said, to a single small case, was still unequalled then in Europe, and was the beginning of the vast collection that now fills the Babylonian and Assyrian rooms. In the summer of 1821, he found himself at Bushire on official business, and well-nigh overpowered by the excessive heat. He accordingly decided to make a short trip to Shiraz, where a friend, who had just returned, gave him the refreshing intelligence that 'the climate even then, in July, was so cold that one was obliged to put on a fur jacket and actually suffered from cold.'[1] Mr. Rich had, however, no cause to complain of the cold. The usual temperature, he found, was 90° at the hottest time, but it fell during the nights to 71°, which he considered 'deliciously cool without being chilly.'[2] It

[1] Rich, *Koordistan*, ii. 186. [2] *Ib.* p. 215.

was impossible for him to be so near Persepolis without gratifying his curiosity. 'My expectation,' he says, 'was greatly excited. Chardin, when I was a mere child, had inspired me with a great desire to see these ruins.' He was, however, merely travelling for health; and he had no intention of undertaking the onerous duties of an itinerant antiquarian. There was indeed no longer any necessity. 'The ruins have been so accurately described, measured, and delineated by our friend Porter that nothing remains to be done; and I can abandon myself entirely to the luxury of imagination, of which the line, compass and pencil, and the intolerable labour they bring on, are eminently destructive.'[1]

On August 17, 1821, he enjoyed the first view of the ruins from his resting place, a mile distant, and with unusual philosophy he repressed his curiosity and continued his march to Murgab. 'I took,' he writes, 'a capricious kind of pleasure in not going to them, and forcing myself to be contented with this general survey.' He passed the little nook of Naksh-i-Rejeb and the ruins of Istakhr, and at length encamped before the 'Meshed i Mader i Suliman.' It will be recollected that the learning of Ouseley had decisively negatived the sagacious intuition of the more brilliant Morier, and the subsequent discovery of the name of Cyrus on the inscriptions at Murgab was as yet far from being accepted as decisive of the matter. The true site of the tomb of Cyrus was therefore still in dispute, and Rich could only venture to write that he 'began to think that this in reality must be the tomb.'[2] He hoped, however, to be able to contribute something to the settlement of the question, but when he left he

[1] Rich, *ib.* pp. 216–18.

[2] *Babylon and Persepolis*, by C. J. Rich (1839), p. 240.

confessed, after all, that he was still unconvinced.[1] He, however, made another copy of the now celebrated inscription. After a stay of only one day, Rich retraced his steps towards Persepolis, and pitched his tent on the top of the great staircase, beneath the shadow of the Entrance Porch.

His resolution to abstain from antiquarian labour entirely broke down in presence of the inscriptions. He employed workmen to clear away the rubbish which in some places concealed them, and he disclosed for the first time the inscription on the south stairs leading to the Palace of Darius,[2] and the one opposite on the façade of the stairs of the Palace of Ochus. 'I was actually diligent enough,' he writes, 'to fall to work at copying the inscriptions; and during the six days we remained at Persepolis I copied all the inscriptions except one. I have found much to corroborate Grotefend's system, and have admired his sagacity. The labour I have gone through will greatly assist him.'[3] Indeed the result of his industry, combined with that of his predecessors, was to leave little more to be done by the copyist at Persepolis. The inscriptions over the animals on the Porch, and the long inscription at Naksh-i-Rustam seem indeed to be the only ones that remained.

1. He copied the three tablets of inscriptions of Xerxes on the Anta of the Palace of Darius, which had been imperfectly done by Le Bruyn (Table 131).[4]

2. The three tablets of inscriptions of Xerxes on the Anta in his palace—now first taken.[5]

[1] Rich, *Koordistan*, ii. 217–19.

[2] Niebuhr had found only $2\frac{1}{2}$ feet of the stairs visible (*Voyage*, ii. 111).

[3] *Koordistan*, ii. 223.

[4] *Babylon and Persepolis*, Pl. 13, 14, and 15; Inscr. C^a.

[5] *Ib.* Pl. 16, 17, 18; Inscr. E.

3. The three tables of inscriptions of Xerxes, consisting of four lines over the king's head on the east portal of his palace.[1] This is the same inscription as Niebuhr had copied from the north portal (his E, F, G).

4. Fragmentary inscriptions of Xerxes found in his palace.[2]

5. The three inscriptions of Xerxes on the south stairs of the Palace of Darius [3]—now first taken.

6. The central inscription of Artaxerxes Ochus on stairs to Palace of Ochus [4]—now first taken.

7. His Seyid copied the three tablets of the inscription of Xerxes over the colossal animals on the east walls of the Porch.[5] Mr. Rich was unfortunately unable on account of giddiness to remain at a height; and on this account he deputed the task to his Seyid, who had some experience of the cuneiform letters found at Babylon. This inscription was now first taken, but the copy turned out to be practically useless; and the first adequate rendering was made by Westergaard.

Coming from Babylon, where all the inscriptions he had seen were unilingual, he was much struck by the repetition of each inscription at Persepolis in three distinct modes of writing. 'Every inscription in Persepolis,' he says, 'even the bits on the robes of the king, are in the three kinds. When an inscription is round a door or window, the first species is on the top, the second on the left hand running up, the third on the right, running down. I speak as looking at the door.' 'If one under the other, the first (or Zend) is always in the upper tablet; if side by side over a figure, it is the

[1] Rich, *ib.* Pl. 18; Inscr. G.
[2] Pl. 19 (*a*, *b*, *c*, *d*).
[3] Pl. 20, 21, 22; C[b].
[4] Pl. 23; P.
[5] Pl. 24, 25, 26; D. See Weissbach und Bang, *Die Altpersischen Keilinschriften* (1893), pp. 5–10.

one over the head of the king; if on his robes, it is on the front fold; if on the face of a platform, it is in the centre, with the figures on each side facing towards it.' 'The other two species always preserve their order: the third (or Babylonian) in the place of least consideration.'[1] He called special attention to the inscriptions upon the tomb at Naksh-i-Rustam. 'They are,' he said, 'the longest of all the cuneiform inscriptions I have ever seen. In fact, there is a prodigious quantity of writing upon them, but so small and so high up and so much worn that I should think it impossible to copy them.'[2] He was neither surprised nor disappointed by his visit, but the impression left was not one of unmixed admiration. The general view presented by the ruins he declared to be grand; the colonnade to be fine, and the execution and finish very beautiful; but he thought the portals at the landing place were much too narrow, all the doors too narrow and the windows too small, yet 'formed of blocks that would build a mole.' There is no correspondence between the object and the means, which gives to many parts of these remains, at least as they now appear, rather a heavy, crowded and crushed effect,' 'proceeding from the disproportionate application of vast materials, which is, after all, a foolish ambition.'[3]

Shortly after leaving Persepolis, he was struck down by cholera, and his death at the early age of thirty-five removed a man exceptionally qualified to render important service to his country and to learning. It had been his intention to send his valuable copies of the inscriptions to Grotefend, who was probably less qualified than Rich imagined to make a satisfactory use of them. As it was, they were not published till 1839, when the

[1] Rich, *Babylon and Persepolis*, pp. 250, 252.
[2] *Ib.* p. 256. [3] *Ib.* pp. 247–55. Cf. *Koordistan*, ii. 222.

progress of cuneiform studies had deprived them of much of their importance.

Soon after the publication of Rich's book, in 1839, the Danish scholar Westergaard visited Persepolis, and completed the transcription of the whole of the inscriptions. He was, as we shall see, fully qualified for the task by his technical knowledge of the subject. Only two new inscriptions, however, remained for him to copy: the one on the Porch that Rich was unable to reach (Inscr. D), and the great inscription on the tomb at Naksh-i-Rustam, which proved it to have been the sepulchre of Darius (Inscr. NR).

Only one Persian inscription of first-rate importance now remained to reward the zeal of the copyist. This was the famous one engraved in an almost inaccessible position upon the rock of Behistun. It is situated on the road from Hamadan to Kermanshah, about twenty miles before reaching the latter place. The rock forms an abrupt termination to a long range of barren hills, and presents a most remarkable appearance, rising in perpendicular form to the height of 1,700 feet. As it lies on the direct route to Media by the Holwan Pass, it was well known from the earliest times. According to Greek legend the hill was dedicated to Zeus; and Semiramis, on the occasion of an expedition against the Medes, caused a portion of the face of the rock to be polished and her own effigy to be carved upon it, surrounded by a hundred of her guards. She added an inscription in Assyrian characters, commemorating her triumphant march.[1] Whether any inscription of the kind ever existed is doubtful, but if so, all traces of it have disappeared. The inscription that has been recovered appears to have been executed in the fifth or sixth year of the reign of Darius; and it gives a lengthy

[1] Diod. Sic. ii. 13.

record of the suppression of the revolts with which his reign opened. It occupies a surface of about 150 feet in length by 100 feet in height.[1] The tablets rest upon a narrow ledge of the rock, 300 feet from the ground, and the engraver could only have executed his task from a scaffolding erected for the purpose. Major Rawlinson tells us that the mere preparation of the surface of the rock must have occupied months. Where a flaw occurred, a piece was inlaid by embedding it in molten lead, and this tedious work was so carefully executed that it can only be detected by close scrutiny. After the letters were engraved, the whole received a coat of silicious varnish, in order to impart clearness of outline and to protect the surface against the action of the weather. 'The varnish,' he says, 'is of infinitely greater hardness than the limestone beneath it.'[2] Notwithstanding all this elaborate preparation, many fissures have been made in the rock by the percolation of water, and the writing is defaced in many places. The inscriptions are grouped round a central tablet decorated with sculpture. The principal figure is Darius the King. He has one foot placed on the prostrate form of a vanquished foe; behind him are two attendants, and in front stand nine captives chained together. The last of the series is evidently a later addition made after the original work was accomplished; and he is distinguished from the rest by the peculiarity of his pointed cap. Close to each figure is a short inscription, giving the name and a relation of the evil deeds of the individual; by which means they are identified with the leaders of the rebellion. The prostrate form is no less a personage

[1] Rawlinson (George), Herodotus edited by (1862), ii. 490; *The Five Great Monarchies* (1879: referred to as *History*), iii. 416. Perrot and Chipiez, *History of Art in Persia* (Eng. ed., 1892), p. 393, but *cf.* p. 38.

[2] *Journal of the Royal Asiatic Society* (referred to as *J. R. A. S.*) x. 193.

than Gaumates, the Magian. Above is the winged figure which is now known to be a representation of Ormuzd himself.[1] Rawlinson considers the execution of the figures as inferior to that of the bas-reliefs at Persepolis. 'The effigies of Darius and his attendants alone exhibit that grace of outline and studied finish of detail which may place them at all upon an equality with the Persepolitan sculptures.' The figure of the King is six feet in height, but the others are of diminutive stature, designed no doubt to mark their inferiority of position.[2] The artist seems to have even taken the trouble to represent them as repulsive in appearance. This part of the work is covered by no less than thirty-three short inscriptions—eleven in Persian, twelve in Median or, as it is now called, Susian, and ten in Babylonian. To the left of the sculptured tablet, and upon the same level, in a position exceptionally difficult of access, are two large tablets in the Babylonian style. To the right are four tablets—two in Susian and two in Babylonian—which were added later, and refer to the events connected with the figure with the pointed cap. This portion is so much defaced that it is difficult to do more than conjecture its meaning. It seems, however, to relate to a revolt in Susiana which, according to M. Oppert, occurred before the twelfth year of the reign of Darius.[3] Its chief was captured and hanged upon a cross. The main body of the inscription lies below the sculptured tablet. Immediately beneath it are four columns in Persian, each twelve feet high, and containing ninety-six lines of cuneiform writing; and a fifth, half

[1] This was suggested by Dr. Hincks in the *Dublin University Magazine*, Jan. 1847, p. 15.

[2] *J. R. A. S.* x. 187, 192.

[3] Rawlinson, in *Records of the Past*, O. S. i. 128. Oppert, *ib.* ix. 68. *Cf.* the later attempts of Spiegel, *Die Altpersischen Keilinschriften* (1881), p. 41, and Weissbach, *op. cit.* p. 29.

that length, relating to the events of the more recent rebellion. To the left, below the large Babylonian inscription, are three columns in Susian. It is calculated that the whole contains nearly a thousand lines of cuneiform writing, of which no less than 416 are in Persian. It is said to comprise ten times as many words as all the rest of the shorter texts put together.[1]

The French traveller Otter seems to have been the first to call attention to Behistun, about the year 1734, and it is also noticed in the travels of Olivier.[2] Kinneir passed it in 1810, and he describes 'a group of figures in the form of a procession sufficiently perfect to show that they are of the same age and character as those of Persepolis.'[3] In 1818, Porter at length succeeded in getting sufficiently near to sketch the figures.[4] He confirms Kinneir's conjecture as to their resemblance to those at Persepolis; and he recognises the winged figure as 'the floating intelligence in his circle and car of sunbeams, so often remarked on the sculptures of Naksh-i-Rustam and Persepolis.' He remarked that there was a cuneiform inscription above the head of each figure and below 'eight deep and closely written columns in the same character.' Notwithstanding the facility Porter had already acquired in copying inscriptions at Persepolis, he was at too great a distance from these to make the attempt. He calculated it would require a month to complete the task, and adds that 'at no time can it ever be attempted without great personal risk.'

The extremely inaccessible position of the inscriptions long baffled the zeal of explorers. M. Flandin, as we

[1] Perrot, p. 33, translator's note.
[2] Evetts (Basil), *New Lights on the Bible*, p. 42.
[3] Kinneir, *Geographical Memoir*, p. 131. *Ib.* 'Asia Minor' (1818), p. 462.
[4] Porter, *Travels*, ii. 154-8.

shall see, though specially commissioned by the French Government to examine Persian antiquities, retreated in dismay from the perilous task, which was left as usual to the private enterprise of an Englishman to accomplish. So long indeed as the history of cuneiform decipherment is remembered, the name of Henry Creswicke Rawlinson will continue to be associated with Behistun. He was not only the first to surmount the very considerable physical difficulties of approaching the inscriptions, but he succeeded, while in a position that was highly inconvenient, if not positively dangerous, in making so accurate a copy that few errors or omissions of importance were afterwards detected. The first copy appears to have been made entirely with the pen—the process of taking paper casts being employed on a later occasion—and it was a task that called for the display of extraordinary patience and most scrupulous care. He had to transcribe, or more properly to draw, vast numbers of signs of multitudinous and fantastic shapes, without at that time having the smallest clue to their meaning—a knowledge that would have served to check the accuracy of his work as he went along. Soon afterwards indeed he became the most skilful of decipherers. He cannot indeed claim to have been the first to solve the difficulties of the Persian alphabet; but his translation of the Behistun inscription was by far the greatest contribution ever made to a knowledge of that language; and he rendered scarcely less remarkable service in unravelling the mysteries of the third, or Babylonian, column.

Rawlinson was born at Chadlington Park, Oxfordshire, in 1810.[1] His family was recognised for centuries

[1] *Memoirs of Sir Henry Rawlinson, Bart., G.C.B.*, by George Rawlinson (Longmans, 1898). In the title-page he is described as K.C.B. According to Dod the higher rank was conferred in 1889: K.C.B. in 1856.

among the principal country gentry of Lancashire; but his father sold his ancestral estate and settled in Oxfordshire. He enjoyed the supreme distinction of winning the Derby in 1841 with Coronation, an achievement that no doubt afforded him scarcely less pleasure than the triumphs of his two illustrious sons, Henry and George.

Henry was the seventh child of a family of eleven. He was educated at Ealing School, which at that time enjoyed a great reputation, and had recently numbered the two Newmans among its pupils. Here he acquired a sound knowledge of the classical languages, so that in after life he could master the contents of almost any Latin or Greek prose author with facility. Indeed when he left he was first in Greek and second in Latin of the whole school. He grew to be six feet high, broad-chested, strong limbed, with steady head and nerve. He was fond of field sports, a taste which he had every opportunity of indulging at Chadlington and which he retained throughout the whole of his busy life. At sixteen he obtained a nomination to the Indian Service, and after six months spent in the study of Oriental languages under a private tutor at Blackheath, he sailed for India, where he arrived in October 1827. He had the good fortune to go out in the same ship with Sir John Malcolm, who had just been appointed Governor of Bombay. He devoted himself to the acquisition of the native languages and Persian, and also to various studies, particularly that of history. On the voyage out he edited the paper that was started for the amusement of the passengers, and this early connection with the press he afterwards continued, so that at the age of nineteen we find him contributing articles and short poems to the Bombay newspapers. But he never forgot that he was a soldier, and that it was no

less part of his duty to cultivate physical activity. He accordingly passed much time in hunting and shooting, and in various athletic games, and one of his great achievements was an extraordinary ride that might now incur the humanitarian censure of a less strenuous age. In 1833, when still a lieutenant, he was one of eight officers selected to proceed to Persia to assist in training the army of the Shah. They landed at Bushire, where they were delayed for some months by the heavy snow on the mountains between that port and Shiraz. Rawlinson's interest in archæological subjects was already awakened, and he took the first opportunity of visiting Shapoor and Persepolis, and making numerous sketches of both places. He was stationed at Tabriz during the summer of 1834, and with characteristic energy he endeavoured to reach the top of Mount Ararat, but he was prevented by the great depth of snow. In the following spring (1835) he was nominated by the Shah to act as Military Adviser to the King's brother, who was Governor of Kurdistan and resided at Kermanshah. On his way he visited Hamadan, and copied the cuneiform inscription at Mount Elvend (April 1835). At Kermanshah he was within twenty miles of Behistun, which, as his biographer observes, 'has been in the Providence of God the great means by which the ancient Persian, Assyrian, and Babylonian languages have been recovered, and a chapter of the world's history that had been almost wholly lost once more made known to mankind.' He passed his leisure time during 1835–37 in transcribing as much of the inscriptions as he could reach, and in the endeavour to fathom their meaning. Sometimes he ascended and descended the slippery rock three or four times a day 'without the aid of rope or ladder or any assistance whatever.' The difficulties are, he modestly says, 'such

as any person with ordinary nerves may successfully encounter.'[1] Towards the close of the year 1835, he paid a short visit to Bagdad, to place himself under the care of Dr. Ross; and he there became acquainted with Colonel Taylor, whom he was afterwards destined to succeed as British Resident. In the early spring, he led a native force of three thousand men through the mountains of Luristan, and took the opportunity of visiting Dizful, Suza, and Shuster. By that time his interest was fully aroused in cuneiform studies, and he no doubt heard from Colonel Taylor of the efforts that had been made in Europe to interpret the inscriptions. The vagueness of his information upon the subject is evident from the prominence he accords to the abortive speculations of St. Martin. We find him, in March 1836, lamenting over the destruction of the famous black stone of Susa, for he had hoped by its means to 'verify or disprove the attempts which have been made by St. Martin and others to decipher the arrow-head characters.'[2] His mind was also occupied with geographical subjects, in which he afterwards attained to great distinction. He wrote to his brother for particulars of the expedition of Heraclius, and thought he had solved the mystery of the two rivers at Susa, which was probably the same as that afterwards announced by Mr. Loftus. He began to look forward to his three years' leave of absence, which he hoped to spend in 'a nice cheap lodging' at Oxford or Cambridge 'for the sake of consulting the classical and Oriental works which are there alone procurable.' Meanwhile he had ordered out books from England, and for the

[1] *J. R. A. S.* x. 15. Layard, however, says he sometimes at least availed himself of a powerful telescope. *Nineveh and Babylon* (1882), p. xliii.

[2] *Memoir*, p. 63.

present he found life tolerable enough. 'I am,' he says, 'in a country abounding with game and antiquities, so that with my gun in hand I perambulate the vicinity of Shuster, and fill at the same time my bag with partridges and my pocket-book with memoranda.' It was not till the autumn of that year (1836), during a short visit to Teheran, that he became acquainted with the alphabets of Grotefend and St. Martin, and learned the progress that had been made by them in Germany and France.

He returned to his post at Kermanshah for the winter of 1836–7, and once more directed his attention to the inscriptions at Behistun. During all this period he continued to be practically the governor of the extensive province of Kermanshah and the commander of a large portion of the army stationed in it. In the summer of 1837, he was relieved of these duties, and received a mark of the Shah's favour by being appointed Custodian of the Arsenal of Teheran. He passed that winter (1837–8) in the capital, and when the British Envoy, Sir J. McNeill, accompanied the army of the Shah to Herat, he found himself left in 'quasi political charge.' Soon afterwards, the progress of political events led to the withdrawal of the Mission from Persia, and Rawlinson found himself at Bagdad towards the close of the year 1838, where he remained till October 1839.

While at Kermanshah (1835–7) he was able to make a nearly correct transcript of the entire first column of the Persian text, together with the opening paragraph of the second, ten paragraphs of the third column and four of the detached inscriptions, amounting altogether to two hundred lines, or one half of the whole inscription.[1]

[1] *J. R. A. S.* x. 7, *note.*

The outbreak of the Afghan war, in 1839, summoned him to a very different sphere of activity. He was recalled to Bombay in October of that year, and in January 1840, he was ordered to Candahar, where he filled the important office of Political Agent throughout the whole of that trying period. It was due in a measure to his energy and prudence, acting in combination with the military talent of General Nott, that the town was saved, and a portion of the disaster at Kabul retrieved. The evacuation of Candahar took place in August 1842, and by the end of the year Rawlinson was back in India. He had been present at three battles and on each occasion was honourably mentioned in despatches; in addition to these services, he accompanied the General as aide-de-camp during the hard fighting on the march to Cabul and the Sutlej. An accidental meeting on board a steamer with Lord Ellenborough, who was then the Governor-General, ripened into friendship, and procured for the young officer an offer of the 'Residency in Nepaul' or of 'the Central India Agency'; but these were declined. Rawlinson had set his heart on completing his cuneiform studies, which had now been suspended by three years of adventure; and although these appointments were of much greater dignity and emolument, he eagerly seized upon the opportunity of returning to Bagdad as 'Political Agent in Turkish Arabia,' in succession to Colonel Taylor. Here he arrived in December, 1843, to 'work out the Babylonian puzzle' and to spend 'twelve weary years of his life doing penance in order to attain a great literary object.'[1]

As soon as he could spare time, in the early summer of 1844, he returned to Behistun, accompanied by Mr. Hester and Captain Jones, R. N.[2] It will be

[1] *Athenæum*, Nov. 8, 1884.

[2] *Memoir*, p. 144.

remembered that up to that time he had only secured two hundred lines of the Persian column, or about one half of the whole. A week of continuous work now enabled him to transcribe the whole of the Persian, the whole of the Susian, and the whole of the detached Babylonian epigraphs. The Babylonian version of the Great Inscription was still found to be inaccessible without more elaborate appliances, and it was abandoned for the present. He spent the year 1845 in completing a Memoir on the subject, which he had begun to prepare in 1839, before the outbreak of the war. The new materials he had just collected rendered it advisable to rewrite the whole work, though the translation he had attempted of the earlier portion remained substantially unaltered. This task involved transcribing four hundred lines of cuneiform, which was a work of no ordinary labour in that climate and among many other conflicting claims upon his time. He began as soon as possible to transmit instalments of his Memoir to England; and in May 1846 we learn by the Report of the Asiatic Society that 'the extraordinary discoveries of Major Rawlinson are now passing through the press and will be shortly published.'

Meanwhile the great discoveries of Botha and Layard had transferred the interest of scholars from the Persian to the Babylonian column, for the latter was seen to bear a close analogy to the inscriptions coming to light with such startling rapidity on the banks of the Tigris. It was evident that the possession of the long inscription at Behistun would greatly increase the knowledge of this language; it covered no less than a hundred and ten lines, and the Persian version, which was by this time practically understood, would materially assist the translation. Accordingly, in

September 1847, Rawlinson returned to Behistun with ladders, planks, ropes, and various other contrivances. But his chief dependence was upon a wild Kurdish boy, who squeezed himself up a cleft in the rock and drove in a wooden peg. To this he fastened a rope, and endeavoured to swing himself across the inscription to a cleft on the other side. This he failed to accomplish on account of the projection of the rock. 'It then only remained for him to cross over to the cleft by hanging on with his toes and fingers to the slight inequalities on the bare face of the precipice; and in this he succeeded, passing over a distance of twenty feet of almost smooth perpendicular rock in a manner which to a looker-on appeared quite miraculous.'[1] He then drove a second peg, and the rope connecting the two enabled him to swing right across. To it he attached a ladder like a painter's cradle, and then, under Rawlinson's direction, he took paper casts of the whole Babylonian text. The work occupied ten days, but unfortunately the inscription was found to be sadly mutilated. 'The left half, or perhaps a larger portion even, of the tablet is entirely destroyed, and we have thus the mere endings of the lines throughout the entire length of the whole inscription.'[2] On his return to Bagdad, he applied himself to the difficult task of deciphering and translating his new acquisition. In this investigation he could as yet derive no assistance from other scholars. Those who were beginning to study Assyrian in Europe, of whom Dr. Hincks and M. de Saulcy were the most notable, had not as yet made farther progress than himself. He devoted the whole of 1848 and part of 1849 to this laborious pursuit, and at the same time added Hebrew to the number of his accomplishments. His 'Second Memoir'

[1] *Memoir*, p. 156, *note*. [2] Rawlinson, in *J. R. A. S.* xii. 408.

was, however, completed in time to despatch to London in 1849, and he prepared to return himself in order to superintend its publication. The 'Memoir on the Babylonian Translation of the Great Inscription at Behistun' finally appeared in the fourteenth volume of the 'Journal of the Asiatic Society,' 1851.

Rawlinson had made the rock of Behistun his own; and although many complaints were heard of the delay that occurred before he could give the results to the world, no one attempted to undergo the dangers he had faced in order to dispute his title to possession. It is to him, therefore, that we owe the recovery of this Memorial of Darius. It afforded a few not very important additions to history, and it was valuable by confirming the veracity and accuracy of Herodotus, which some writers were still disposed to impeach. But its chief importance lay in the length of the text, which for the first time presented sufficient materials to enable the student to acquire a competent knowledge of the old Persian language. Once in possession of this key, he could apply it to the solution of the more difficult problems afforded by the other two columns, and in this manner three ancient and forgotten languages were restored to knowledge.

We have now come to the time when the enterprise of individual travellers was about to be superseded by commissioners sent by foreign Governments to collect information in an official capacity. We cannot say that the general reader has cause to be thankful. We now part company with the modest volume that could be purchased and handled with comparative ease. In its place we have massive folios, which an enterprising student may indeed find in the 'large room' of the British Museum, but which are beyond the power of a private library to acquire. No one untainted by

African gold could contemplate their possession, and indeed it would be necessary to build an addition to an ordinary house to find them accommodation. They are not adapted for study, for they tax too severely the physical endurance of the reader. The writer who is employed to fill in the blanks between the magnificent illustrations, is probably sensible of this, and one of them, M. Flandin, afterwards republished his text in a more convenient form. These vast folios are designed, we should think, mainly for the glorification of the Government who has paid for them, and for the benefit of the various mechanical persons employed in their fabrication. Sumptuously bound in red morocco, with richly gilt edges, they serve only to be rolled into the room of a palace in order that the pretty pictures that adorn them may be idly scanned amid the chatter of a tea-table.

The first of these great compilations that comes under our notice was made by Charles Texier, who had already gained fame and experience by his 'Description de l'Asie Mineure,' published between 1838–48. He was a Government Inspector of Public Works, and he subsequently became Professor of Archæology at the Collège de France (1840). He obtained a grant of 160,000 francs to enable him to publish his book, a sum afterwards reduced to 100,000. He does not seem to have regarded this measure with as much satisfaction as the reader, for he was compelled upon this occasion to restrict his publication to only two folios; and he complains that he had to suppress a considerable portion of his vast collections. In 1839 he set out for Persia, and the account of his travels was published by instalments between the years 1842 and 1852. In 1849 very few of the plates referring to

Persepolis had appeared, and no text,[1] but Fergusson was able to use a considerable part of the drawings, in 1850, for his 'Nineveh and Persepolis.'

Texier set out upon his enterprise, as Porter had done before, with a desire to aim at the most scrupulous accuracy; but his fatal passion for 'restorations' has made sad havoc of his moral aspirations.

He began the Persian portion of his work at Van, and travelled steadily round to Persepolis. Like Flandin, who followed closely on his track, he was prevented by the disturbed state of the country from visiting Susa. He devoted two days (January 12–14, 1840) to Murgab, and gives six drawings. He was fully convinced that the famous tomb was that of Cyrus, though the winged figure may be only 'a prince or magus in the attitude of devotion.'[2] He confessed he could make nothing of the general disposition of 'the Palace'; it consists, as he candidly admits, of 'a certain number of pillars, of which the relations cannot be easily established; a large column and remains of walls.' The second palace noticed by Porter seems to have escaped his observation. Persepolis occupied him for about ten days, and resulted in twenty-four drawings. His general views have nothing of the artistic merit afterwards displayed by Flandin, and they are probably in no degree more accurate. He observed from the *débris* at the bottom of the outside wall of the Terrace that it had been originally ornamented by a parapet; and he considered there were distinct traces of a triple wall of defence on the hill at the back, which may in some degree account for the description given by Diodorus. He thought that nearly all the buildings had been left incomplete, an

[1] Fergusson (James), *The Palaces of Nineveh and Persepolis*, p. vii.
[2] Texier, ii. 151.

opinion that has since gained ground. He maintained that the central group in the Columnar Edifice was intended to be enclosed by a wall and roofed; and he suggested that the design on the tombs, with a stage above, was a correct representation of the architecture of the palaces, a view afterwards supported by the authority of Sir James Fergusson. He was fully convinced that the bas-reliefs had been originally coloured; and one of the chief objects of his journey was to collect evidence on this point. It is singular to find that the writer completely ignores the results already achieved in decipherment, and that he still describes the Palaces of Darius and Xerxes as the Hareem and the Baths: an eccentricity into which M. Flandin also falls. Texier excels in measurements; they agree substantially with those of Flandin and Coste, and differ by about ten per cent. from those of Porter.[1] The work of Texier was from the first almost completely superseded by that of Flandin, who passed over the same ground only a few months later (October 1840) and who, as we have said, has wisely republished his narrative in a comparatively portable form.

When the English mission to which Rawlinson was attached withdrew from Persia, the Shah made overtures to Louis Philippe with a view to replace the English by military instructors from France.[2] The French king judged this a favourable opportunity to reopen diplomatic relations with Persia, and he accordingly despatched the Count de Sarcey on a mission to the Shah. The ambassador was accompanied by a numerous staff, each member being charged with the investigation of a particular subject. The embassy assumed the character of an exploring expedition quite as much as that of a

[1] Fergusson, p. 160, *note*.

[2] Flandin (Eugène), *Voyage en Perse* (2 vols, 1851), i. 5. *Cf.* p. 497.

political mission. One attaché was required to make a special study of the geology, another of the arts, a third of the industry, as if the country had been hitherto wholly unexplored by Europeans. The proposed adventure excited much interest, and the two Academies of Inscriptions and Beaux Arts solicited permission to send representatives. This was duly accorded, and MM. Flandin and Coste were elected by the suffrage of the members of the Academies: the one in the capacity of artist, the other in that of architect.

M. Coste was already familiar with the East, and was known by a work on the Arabian monuments of Cairo. M. Flandin was apparently unused to the inconveniences of Oriental travel, and his book presents us with a harrowing picture of the sufferings he endured. It is indeed wonderful that he survived his cook, whom he describes as a 'véritable empoisonneur,' or the numerous lacerations of soul he underwent as, one by one, his friends returned to the shade of the boulevards and left him behind a prey to the tortures of the Persian sun. Still more wonderful that he should have escaped alive from so many perils. At one time, he and his horse roll together into a trench from which there seemed no visible escape; at another, the enthusiastic artist is seen scrambling up the rock of Behistun with bleeding feet and hands to find his toil and peril fruitless, and to accomplish a descent backwards by a 'véritable gymnastique de lézard'; or again his excitable temper involves him in personal encounters with the natives, in which blows are freely exchanged on both sides, and on one occasion he received a stab with a poniard. These adventures, however amusing to himself and his readers, unfortunately involved his antagonists in shocking punishments by flogging, which

[1] Flandin, *Voyage*, i. 451.

the courtesy of the Persian officials thought it necessary to inflict, although Flandin is not always free from the blame of having been the first to give provocation.

The embassy left Toulon on October 30, 1839, but it was not till the following June that the two artists settled down before the rock of Behistun, where they found numerous traces of ruins in the plain on both sides of the river, which indicate the former existence of a very considerable town; but there was nothing that pointed to an earlier date than the Greek and Sassanian periods. The only exception is the cuneiform inscription on the rock itself. Three years before, Major Rawlinson had succeeded, as we have said, in obtaining paper casts of about two hundred lines of this inscription. M. Flandin does not seem to have been aware of this achievement, otherwise he would have been less willing to declare that it is impossible to approach. After having 'done all that was possible,' the two travellers went on to Kermanshah. M. Coste proceeded to Sar-i-Pul-i-Zohab, where he copied a bas-relief, which was afterwards found to be of Medic origin; and Flandin was left alone to accomplish the task of copying the Sassanian inscriptions at Takht-i-Bostan.[1] After eighteen days of solitude, he returned once more to Behistun in a more resolute frame of mind. Upon this occasion he brought ladders to assist him to scale the rock; but these turned out to be too short. He declared that without a scaffolding made expressly for the purpose, it would be impossible to accomplish his object, and even then he foresaw great difficulties in its erection. As it was, he was without rope, or wood, or workmen. He, however, made one last effort, and succeeded at some risk in scrambling up to the ledge at the base of the tablet. He found the

[1] I. 423, 443, 448.

inscriptions were even then beyond his reach, and it was impossible to recede a sufficient distance to obtain a tolerable view. He ascertained that they consisted of seven columns, each of ninety-nine lines, and that there were also tablets above the figures.[1] It must be admitted that the result was extremely unsatisfactory, considering the official position of the explorer. He abandoned the enterprise and left the honour to Major Rawlinson, who, as soon as political events permitted, revisited the scene and completed the task he had already begun. Flandin and Coste returned to Ispahan in August, and after a period of rest they proceeded, early in October, to Murgab. Here they remained for two days. M. Flandin hesitates to accept the identification of the ruins with those of Pasargadae, and prefers Fasa: an impression which, however, wears off later, when he had visited that place.[2] He describes the ruins of the principal palace at Murgab to consist of three pillars and a column. 'There are,' he adds, 'no means of obtaining sufficient data to reconstruct the plan. Nothing is to be found except the foundations of columns and pillars, which lead to the belief that it was formerly the site of some important structure.' Not more satisfactory is his notice of the Terrace, which, he says, is the remains of an edifice of which it is impossible to recognise the character. These descriptions scarcely prepare us for the very elaborate plans that appear in the plates, upon which the modern ideas of the place are chiefly based.[3] From Murgab they proceeded to Naksh-i-Rustam, where they again allowed themselves to be baffled by difficulties that they should certainly not have treated as insuperable. They observed the long inscription on one of the tombs,

[1] I. 450-1. [2] II. 79, 362.
[3] II. 83-4. *Cf.* Pl. 194-203.

which they made no effort to copy, because it happened to be in a position which they considered inaccessible. They reconciled themselves to the omission the more easily on account of its mutilated condition, which they thought would defy the perseverance of the decipherer; otherwise indeed it might be found to record 'the life of the illustrious dead intombed within.'[1] Less than two years after they had left, this very inscription was copied by the Dane Westergaard; and in 1843, or seven years before Flandin published his book, it had been deciphered by Lassen, who found that it declared the tomb on which it was inscribed to be that of Darius Hystaspes. From their quarters at Husseinabad they visited various objects of archæological interest, and made drawings and plans of them. They finally removed their camp to Persepolis on October 25, and remained there to December 8. During that period of forty-three days they made upwards of a hundred magnificent drawings of the place, which will always remain a striking proof of the industry no less than the talent of the two artists. The plates include highly-finished pictures of the Terrace and surrounding country taken from various points of view; admirable drawings of the different buildings, and of all the numerous bas-reliefs they contain; ground plans of the platform and of each of the principal edifices; besides copies of all the inscriptions. The work is farther enlivened by a few pictures of Persepolis before it fell into decay, restored according to the imagination of the ingenious artists. The scale upon which this work is executed may be judged from the number of plates devoted to the more important objects. The sculptured staircase fills no less than twenty-two; the Palace of Xerxes and the Hall of the Hundred Columns occupy

[1] II. 125.

twelve each; while sixteen plates are appropriated to inscriptions.

There can be no doubt of the high artistic merit of these drawings; but it must have been impossible within the time to complete them upon the spot; and they have no doubt suffered in accuracy by subsequent elaboration. Sir James Fergusson indeed goes so far as to declare that they cannot be relied upon to decide any matter requiring minute accuracy of detail, and he points out several 'of their many mistakes.'[1] It may be doubted also how far their plans and measurements are absolutely trustworthy. There is certainly the most surprising and singular contrast between the doubt and hesitation expressed in the text and the confidence and minute execution displayed in the plates.[2] The surveys indeed may be due chiefly to M. Coste: and it is possible he may not have communicated all the results of his investigations to his volatile companion. While the latter despairs of detecting the plan of the edifice at Murgab, or those of the Palaces of Darius and Ochus at Persepolis, we find all three set down with the utmost precision upon the plans; and while the one traveller declares that all the tombs at Naksh-i-Rustam contain accommodation for an equal number of bodies,[3] M. Coste was quietly making the plans that refute this statement. It cannot be admitted that the combined

[1] Fergusson, p. 107, *note*; p. 165, *note*; p. 176; Flandin counted only three windows on the north side of the Hall of the Hundred Columns. Their number is not yet ascertained. See Curzon, ii. 177. This is a point, says Fergusson, 'which nothing but the most inexcusable carelessness could have left at all doubtful.'

[2] *Cf.* the account already given of the principal palace at Murgab (Flandin, 8vo, ii. 83) with the Pl. 197. See also the account of the Palace of Darius, p. 176, and the Palace of Ochus, p. 184, and compare with the plates. Of the Palace of Darius he says: 'C'est à peine si l'on en retrouve assez de traces pour reconnaître la distribution intérieure de l'édifice,' p. 176.

[3] II. 125.

work possesses any exceptional authority, or that it suffices to set at rest the many doubtful points that have arisen with reference to these ruins. So far from its having superseded the more careful labours of Porter, it is entirely deficient in the minute and accurate verbal description in which that writer excels.

The copies of the inscriptions made by the two explorers have received the praise of M. Burnouf, and they are certainly wonderful productions, especially when it is considered that neither appears to have had the smallest knowledge of the cuneiform writing. If they had been able to face the perils of Behistun or the difficulties of Naksh-i-Rustam, they might still have anticipated the work of Rawlinson and Westergaard. At Persepolis itself there was little that was now left for them to accomplish. They appear to have been the first in point of time to make a serviceable copy of the inscriptions over the Porch; Rich, it will be recollected, was forced to abandon them to his Seyid, who failed in the attempt. But this inscription was first published by Westergaard, although his copy was made two years after that of Flandin. Flandin seems, however, to have been the first to publish the inscription of Artaxerxes Ochus from the west stairs of the Palace of Darius; but the same inscription occurs also on the Palace of Ochus, and this was already well known through the copy made by Rich. MM. Flandin and Coste have not therefore made any contribution to our knowledge of the cuneiform inscriptions. They, however, carried on somewhat extensive excavations. They employed labourers to clear away the rubbish that had accumulated in the palaces and which obscured the lower portion of the bas-reliefs. By this means they brought to light a Sassanian relief at Naksh-i-Rustam which had hitherto been unobserved, and which they found to be covered with a Pehlevi

inscription.[1] At Persepolis they claim to have discovered eight entirely new bas-reliefs, besides disclosing the lower portion of many others.[2] They dug up the statue of a bull near the east stairs of the Palace of Xerxes, the only monument *en ronde* which has been found among the ruins.[3] They disclosed the head of a bull among the *débris* of the Porch, and finally set at rest the long debated question as to the nature of the colossal animals. They completed the portraiture of the guards on the façade of the sculptured staircase, by raising the fallen masonry.[4] They were the first to clear away the rubbish that had collected in the Palace of Darius, and to disclose the bases of the columns that had supported the roof.[5] They settled the nature of the monster with which the king is seen to struggle, by unearthing its tail, which proved to be that of a scorpion.[6] They were the first also to show the correct position and number of the columns in the Portico of the Palace of Xerxes. They were also the first to show the former existence of columns in the South-Eastern Edifice.[7] Fragments of columns strewn on the ground within the Hall of the Hundred Columns had been remarked by Kaempfer and by Niebuhr; but they do not seem to have been observed by Flandin and Coste. It was due to their laborious excavations that it was ascertained, after six and a half feet of rubbish had been cleared away, that the edifice had originally contained ten rows of columns of ten in each in the centre, and two rows of eight in the Portico.[8]

In the beginning of the year 1841, they found themselves at Fasa, and speedily recognised that it could not

[1] Flandin, ii. 98, 106–10.
[2] *Ib.* i. 493.
[3] II. 186.
[4] *Ib.* p. 160.
[5] *Ib.* p. 177; Fergusson, p. 117.
[6] Flandin, ii. 179.
[7] *Ib.* p. 187; Fergusson, p. 132.
[8] Flandin, p. 196; Fergusson, p. 176; Ouseley, ii. 239; Niebuhr, ii. 121.

compete with Murgab as the representative of Pasargadae. On their return to Shiraz, they ascertained that Baron de Bode, an attaché to the Russian embassy, had just left for Susa. When at Kermanshah, in the preceding summer, they abandoned an attempt to reach that place from the south through the defiles of Luristan. Such an enterprise would probably not have been very easy even to travellers much better suited to deal with the turbulent tribes; and it would most likely have proved fatal to one of M. Flandin's excitable temperament. But now an opportunity offered to follow close upon the steps of a traveller protected by the authority of a diplomatic mission, and along a route that circumstances rendered at that time exceptionally secure.[1] M. Flandin finds some difficulty in excusing his neglect to perform a journey which his commission seemed to demand. He tells us that his purse had begun to feel the strain of eight months' travel, although we find it was still sufficient to support the cost of another year in safer and pleasanter quarters.[2] Having abandoned this project, they returned for a few days to Persepolis, in order to obtain a few plaster casts of the more striking bas-reliefs. They reached Teheran on March 20, where they met Baron de Bode, who had just returned from Susa. The inspection of the antiquities he had collected 'in that country, the object of our regrets,' must have excited some mortifying reflections; though they gladly inferred from the drawings that the place 'offered in reality little of interest.'[3] The excavations of Mr. Loftus, ten years later, dispelled this flattering illusion. After a month spent in the enjoyment of royal favour,

[1] Notwithstanding an escort of irregular horse, Baron de Bode, however, narrowly escaped receiving a volley into his party from the Bakhtiyari, whose impetuosity was only restrained by Mr. Layard, who happened to be among them at the time. Layard, *Early Adventures* (1894), p. 210.

[2] Flandin, ii. 380–81.

[3] *Ib.* p. 433.

they left Teheran (April 24), and proceeded by Tabriz and Urmia to Bagdad, which they reached in July. M. Flandin bade farewell to Persian territory after a free interchange of blows with the people of the frontier village.[1] From Bagdad he paid hurried visits to Hillah and Mosul; and left early in September for Aleppo and Beyrout, where he embarked for France on December 1, 1841.

He revisited the East in 1843, in order to sketch the monuments discovered by M. Botta at Khorsabad. In consequence of this employment, the publication of the results of the Persian journey was greatly delayed. The 'Voyage en Perse' was not even written till 1850, and it did not appear till the following year.[2] The folio edition with plates bears no date. A portion of the plates was used by Mr. Fergusson in 1850, for his book on the Palaces of Nineveh and Persepolis, but they were not available the year before.[3] They brought home two hundred and fifty-four drawings and thirty-five copies of inscriptions, most of which they profess to have executed on the spot;[4] and the collection forms an extremely valuable addition to our knowledge of the antiquities of Persia. M. Flandin was strongly of opinion that no individual enterprise could hope to compete with the minuteness of research and the untiring industry of an official like himself, who was charged with a Government mission, and invested with the confidence of two academical bodies.[5] A Government can indeed afford to publish a book no one can

[1] Flandin, ii. 481. [2] *Ib.* i. 489, *note*.

[3] Some of the plates seem to have appeared in 1848 (*J. R. A. S.* 1848, ix. 393, *note*), but the earliest received in the British Museum was in August 1850; others not till September 1851. The plan of the S.E. edifice and the general plan of the ruins were not available for Fergusson up to December 1850. See Fergusson, p. 96, *note*; p. 132, *note*.

[4] Flandin, i. 492. [5] *Ib.* i. 10.

afford to buy, but it seems unable to imbue its commissioners with the energy so frequently displayed by private individuals. The lamentable failure of Messrs. Flandin and Coste before the rock of Behistun and the tomb of Darius; besides the serenity with which they abandoned even an attempt to reach Susa, afford sufficient evidence of this. M. Coste is scarcely even mentioned in the 'Voyage'; but we see enough of M. Flandin to recognise that he did not possess the qualities that make a successful explorer. His narrative is interrupted and disfigured by puerile details of personal adventure in which he evinces a complete absence of the coolness, the nerve and the tact requisite for his task. He magnifies to absurd proportions the risks to which he is exposed; he is constantly involved in humiliating personal encounters with the people of the country, in which he displays vastly more temper than courage. The reader might be tempted to regard these conflicts with some complacency, if it were not for the excruciating punishment with which the politeness of the Persian authorities thought fit to visit his assailants.[1]

Very little more now remained to be done to illustrate all that is necessary to know of these Persian ruins. The inscriptions had been successfully recovered and

[1] For a few of these scenes see ii. 28, 93, 103, 174, 397. He cared little whether the punishment fell on the right man. After one of these encounters he writes: 'Au bout d'une heure le Ket-Khodâh arriva avec quelques hommes qui en conduisaient un autre les mains liées, qu'ils me présentèrent comme celui qui avait été instigateur des offenses dont je me plaignais. *Je ne le reconnaissais pas; mais peu importait.* Ce que je voulais, ce que je devais à mon habit de frengui, c'etait de ne pas laisser impunie une aggression comme celle dont j'avais eu à souffrir . . . *je me contentai donc du prétendu coupable qui m'était amené*: le Ket-Khodâh le fit coucher sur le dos; on lui attacha le bas des jambes à un bâton dont les extrémités étaient tenues en l'air par deux hommes qui lui administrèrent des coups de verges sur la plante des pieds. Lorsque je crus avoir assez fait pour l'exemple j'arrêtai les coups' (ii. 398).

many times copied. The Persian text had been fully translated, and only a few obscure passages awaited farther elucidation. Still the most careful accounts were found to conflict on many points, and neither Porter nor his successors had removed the discrepancies and contradictions that had been so long remarked.

After the lapse of many years, it was determined to appeal to the new art of photography, in order to obtain a degree of accuracy that could not be achieved by the pencil. The first to make the attempt was a Mr. Ellis, but his negatives were entirely destroyed in the course of the rough journey to the sea. At length Herr Stolze made another and very successful effort.[1] He was attached to a German scientific expedition, sent out to the East in 1874, under the direction of Dr. Andreas, to observe the transit of Venus. Stolze spent some time travelling over Persia, and visited among other places Persepolis and Fasa in the winter of 1874; but his real work began in June 1878, a season of the year when the heat is excessive, and when the process of developing the negatives within a closed box involved actual suffering. Notwithstanding these disadvantages he took upwards of three hundred plates between the date of his arrival on June 16 and his departure on July 3. He found the vertical sun of summer better suited for photographing the inscriptions than the bas-reliefs, especially those situated in the deep shade of the doorways. One of his greatest achievements was the photogrammetric plan of Persepolis, which surpasses any previous attempt to arrive at an accurate survey. It is said that no fewer than three hundred and fifty plates were used in the construction of the three metrical

[1] Noeldeke (Theod.), *Persepolis : Die Achaemenidischen Denkmäler*, Berlin, 1882, 2 vols. fol.

plans at the end of his second volume.[1] After a few days spent at Murgab, he hastened back to cooler quarters. His negatives were so carefully packed that they all reached Europe in safety. Unfortunately, one case was opened at the London Custom House, and the plates were replaced so loosely by the bungling official that a few were cracked; but even these have been pieced together without retaining much trace of their ill usage. In the course of his travels he took no fewer than fourteen hundred negatives, and in the spring of 1879 he had the satisfaction to find himself at Berlin with his treasures. In September 1881, he submitted a few of the completed photographs to the Fifth Oriental Congress, and they sanctioned the publication of those relating to the Achaemenian and Sassanian periods. The result was the appearance, in 1882, of 'Die Achaemenischen Denkmäler von Persepolis,' photographed by Stolze and edited by Noeldeke; and two more ponderous and magnificent folios were thus added to the growing mass of inaccessible lore. Persepolis alone occupies ninety-nine plates, and the scale on which the work is executed may be judged from the devotion of twenty-one views to the Palace of Darius, eighteen to the Palace of Xerxes, twelve to the Hall of the Hundred Columns, and twelve to the Hall of Xerxes. Nine plates (106–14) are devoted to Naksh-i-Rustam and eleven (127–37) to Murgab. It is doubtful how far the photographic process will assist the student of the inscriptions. Noeldeke fears it will be of little value as regards the Pehlevi; and certainly little can be made out of the cuneiform except by the constant and painful use of a powerful magnifying glass. They may, however, be occasionally useful to decide disputed points: as, for example, the photograph of the inscription on the Anta

[1] Noeldeke, *ib.* 'Vorwort,' vol. i.; Pl. 148–50.

of the Palace of Darius proves that the transcription of Westergaard is correct, and that of Rich wrong (Plate XIII.). Another photograph shows that the error in one of Niebuhr's copies is due to a defect in the original.[1] Elsewhere Niebuhr is shown to be even more careful than Westergaard.[2] The photographs of the monuments and bas-reliefs meet with a very varying measure of success. Some are so blurred and indistinct that it is fortunate that they are each labelled in German, French and English; otherwise we might doubt whether they are correctly described.[3] Comparative success is reached more frequently, and excellence occasionally. It is particularly unfortunate that the great sculptured staircase has not been taken on a sufficiently large scale to bring out the figures with distinctness (Pl. 77 ff.); Noeldeke is, however, of opinion that it is the best view of them taken since Ouseley, thus passing over both Porter and the two French artists, Texier and Flandin. Among the most valuable views from Murgab are the two plates showing the Tomb of Cyrus (Pl. 128–9). The series closes with what might pass for a snowy mountain in Switzerland, but which is explained to be fragments of a bas-relief at Pasargadae (Pl. 137). Noeldeke, like Texier, fully believes in the destruction of some of the buildings by fire, and he also considers that few of them were ever thoroughly completed; indeed he attributes to that cause the absence of all traces of walls round the Hall of Xerxes, or of a roof. He thinks there never were any more columns than can now be identified, and that some even of these were left unfinished. The same applies to the Entrance Porch; possibly the gates on the North and South sides (which are supposed to have

[1] Note to No. 46. *Cf.* No. 76. [2] Note to No. 95.

[3] The following may be referred to as complete failures: Plates 9, 10, 14, 33, 35, 36, 37 and 58.

been part of the general design) were never erected; nor the second pair of columns. At the instigation of Dr. Andreas, a trench was dug into the Central Mound, which had long been the object of so many conjectures, with the disappointing result that it was found to contain nothing but cuttings discarded by the masons.

Three years later, in 1881, these ruins were visited by M. Dieulafoy and his wife, Madame Dieulafoy, who notwithstanding the disabilities of her sex, has been appointed a Chevalier of the Legion of Honour and an Officer of the Academy. The journey has resulted in the production of two vast works: one an elaborate treatise on 'L'Art antique de la Perse,' in five volumes, petit in-folio, 1884, by Monsieur Dieulafoy; and a single volume of massive proportions descriptive of their travels by the valiant and industrious lady.[1] M. Dieulafoy is one of the best known writers in France on architecture, and his opinions, though at times as fanciful as those of M. Flandin, are always worthy of respect. Madame Dieulafoy displayed marvellous pluck in the course of her adventures, and extraordinary expansiveness in their relation. When the span of life is lengthened to that enjoyed by the patriarchs, there will be time to study her works at leisure. One other traveller should be named who has given an admirable account of Persepolis, and, if detached from its cumbrous surroundings, one more adapted to the pressure of modern times. Lord Curzon visited Persia in 1889–90 and he has devoted a chapter of his Travels (chap. xxi. vol. ii.) to the subject. It is by far the best description we know, and affords all the information that need be sought. He frequently calls attention to the extraordinary contradictions to be found in the various writings on the subject, which, from the days of Porter,

[1] *La Perse*, par Mme Jane Dieulafoy, Paris, 1887.

it has been the constant aim of successive travellers to remove. In mere matters of opinion there is, of course, no prospect of reaching unanimity in this or in any other subject. Whether the great halls were walled and roofed, or protected only by falling curtains; whether the palaces were ever occupied as residences or reserved only for state ceremonial, and a host of other disputed questions, will remain points of controversy. Each successive traveller with pretensions to originality to establish will continue to put forward new theories, and he will illustrate the beauty of his imagination by elaborate drawings of his conjectural restorations. These are inevitable failings of humanity and must be treated with toleration; but it is different when mere questions of fact are involved. After three centuries of travellers to Persepolis, we have still to reiterate the desire of Fergusson that some one may yet be found 'who will go there with his eyes open, which does not seem yet to have been the case.'[1] Although the sun itself has been summoned to share in the task, even still there is a conflict of evidence as to the number of windows in the Hall of the Hundred Columns, as to the number and position of the columns in the Palace of Darius, and many other points too tedious to mention. There may indeed be more important questions in the world awaiting solution than even the exact construction of a Persepolitan palace, but it is irritating to find, notwithstanding our painful quest, that Truth evades our grasp in this as in weightier matters.

Persepolis was fully known and its inscriptions translated before any attempt was made to explore the site of Susa. Major Rennell was among the first to identify it with Shus, about fifteen miles S.W. of Dizful.[2]

[1] Fergusson, *Palaces of Nineveh and Persepolis*, p. 162.

[2] Kinneir, *Geographical Memoir*, p. 100 Porter; ii. 411; Curzon, ii. 309.

The place was visited in 1810 by Captains Kinneir and Monteith, who were attached to the mission of Sir John Malcolm.[1] The former describes the ruins as lying about seven or eight miles to the west of Dizful and not unlike those of Babylon. He describes it as consisting of a succession of mounds covered with fragments of bricks and coloured tiles extending over nearly twelve miles. Two mounds attracted special attention. The first rises to a height of a hundred feet and is about a mile in circumference. At its base is the reputed Tomb of Daniel, a building that appears comparatively modern. The other mound is not quite so high, but it is nearly two miles in circumference. They are composed of a mixture of brick and clay, with irregular layers of brick and mortar five or six feet thick to serve as a prop. Large blocks of marble covered with hieroglyphics were reported to be occasionally discovered by the Arabs.[2] One of these—the famous 'black stone'—was seen by Captain Monteith near the Tomb of Daniel, where it had recently been rolled down from the summit of the Citadel Hill. It was not more than twenty-two inches long and twelve broad, but it had a cuneiform inscription on one side, and various sacred emblems represented upon the other. He made a sketch of it and might then have purchased it at a moderate price; but, though not large, it was found impossible at that time to remove it. Shortly afterwards two other Englishmen—the unfortunate Grant and Fotheringham—offered seventy pounds for it, but their intention to take it with them on their return was frustrated by their murder.[3] The value set

[1] Kinneir, p. 92.

[2] *Ib.* p. 100.

[3] W. K. Loftus, *Chaldæa and Susiana* (1857), pp. 417–19. A sketch of the stone may be seen in Walpole's *Travels in Turkey*, ii. 426, and is reproduced in Loftus, p.419.

upon it by the foreigners raised it in the estimation of the natives to such a height that the subsequent effort of Mr. Gordon to get possession of it utterly failed (1812).[1] It was already invested with the mysterious virtue of a talisman, and its loss, it was thought, would involve the country in disaster. To secure its retention resort was had to the singular expedient of blowing it into a hundred fragments by gunpowder. The destruction, however, was not complete, and the fragments were afterwards carefully collected, and secretly built into a pillar in the Tomb of Daniel, where they now are. In 1836 Rawlinson was able to pass two days amid the ruins in the course of his march from Zohab to Shuster. His visit, he thought, had enabled him to 'unravel the mystery of the two rivers Eulaeus and Choaspes.' He heard that the 'black stone' had been blown to pieces, but he was evidently not informed that the fragments were collected and were then in the Tomb of Daniel. He was rewarded, however, by the discovery of a broken obelisk with 'a very perfect inscription of thirty-three lines,' which was afterwards found to be written in Old Susian.[2] Five years later, Mr. Layard penetrated into the tomb disguised in Arab dress, and was told by a dervish that the precious inscription was buried there. In the outer court he was shown one or two small capitals and other vestiges of columns that had fallen from the mound; and also the fragment of a slab with a few cuneiform characters almost obliterated. The mound appeared to him little inferior in size to the Mujelibi, and he found and copied an inscription from a marble

[1] Ouseley, i. 420.

[2] Rawlinson, *Memoir*, p. 63; Bonomi, *Nineveh and its Palaces* (1889), p. 479; Loftus, p. 344; *J. R. A. S.* xii. 482. This inscription was long known as the Susra Inscription, from the name of the king as deciphered by Rawlinson.

slab nine feet long by two feet six inches broad.[1] It was during this visit to Persia that he went to Malamir, in the valley of the Upper Karun, south-east of Susa, where he copied two long inscriptions, in a dialect of the Susian, one of thirty-six lines and the other of twenty-four, and made drawings of the singular bas-reliefs which accompany them.[2]

The first information of importance concerning Susa comes, however, from Mr. Loftus. He was attached as geologist to Sir W. F. Williams's mission for the delimitation of the Turkish and Persian frontier, between 1849 and 1852. His first visit to Susa was made in May 1850. The ruins, he says, cover an area of about $3\frac{1}{2}$ miles in circumference, within which four separate mounds are distinctly marked. The loftiest he estimated at about 2,850 feet round the summit, and it had evidently been the citadel.[3] To the north is a larger mound at a lower elevation, and here it was that he was rewarded by the discovery of the ancient palace. To the east of these is another, which he calls the Great Platform; it covers sixty acres, and does not exceed seventy feet in height. Beyond it, still farther eastward, may be discerned some remains that indicate the place where the city itself stood (No. 4 on plan).

The excavations were begun in 1851 and at first without decisive result. Three trenches were 'dug' into the citadel mound to the depth of nineteen feet, but failed to discover anything except portions of a brick pavement, fragments of moulded composition-bricks stamped with cuneiform and covered with green glaze.'[4]

It was not till the following year that Mr. Loftus

[1] Layard, *Early Adventures*, pp. 352–6.

[2] Layard, *ib.* p. 167. For drawings see Perrot and Chipiez, *History of Art in Persia*, p. 378.

[3] Loftus (W. Kennett), *Chaldæa and Susiana* (1857), p. 343.

[4] *Ib.* p. 352.

succeeded in excavating a building almost exactly similar to the Columnar Edifice at Persepolis. He determined the position of twenty-one bases of the central group; two bases in each row of the eastern colonnade, and three of the western. On the north he found three bases, all in the inner row, and it is still doubtful if there ever was a second row on this side.[1] He ascertained that the building consisted, as at Persepolis, of a central square of thirty-six columns, surrounded on three sides by a colonnade, and we are indebted to him for the measurements. His opinion is that the central group was roofed, but not enclosed by a wall, and the space between it and the colonnades was open.[2] He searched in vain for the traces of walls such as Fergusson suggested had existed at Persepolis; and was the more convinced that none had ever existed because he found distinct traces of foundations elsewhere. He brought to light a trilingual inscription, repeated four times on the bases of the columns, which were found to have been written by Artaxerxes Mnemon (Inscr. S). They are of more than usual interest, for the King traces his genealogy back to Hystaspes, and confirms thereby the statement of Herodotus. He states also that he built the hall, or, as he calls it, the Apadana, on the site of an earlier edifice erected by the great Darius, and afterwards destroyed by fire during the reign of Artaxerxes I. He likewise invokes Mithra and Anahita for the first time side by side with Ormuzd as tutelary deities. Another evidence of degeneracy is seen in the corruption of the language, which exhibits several grammatical solecisms. Another short trilingual legend of the same king was found round a column in a different part of the mound, and several detached bricks and vases with the names of Darius and Xerxes, but no other trilinguals

[1] Loftus, pp. 366–7. [2] *Ib.* pp. 368, 375.

of importance. On the other hand, the long inscription in thirty-three lines found by Rawlinson on the Citadel Hill, and the two inscriptions found by Layard at Malamir, gave rise to fresh difficulties. It was recognised that the writing was different from any yet known; and the perplexity was heightened when it was farther observed that they differed from one another. Here, then, were two new methods of writing, and possibly two new languages added to those already in hand; and there seemed to be no end to the task imposed on the cuneiform student. For some time little effort was made to grapple with these new problems. The script found on the Citadel Hill received the provisional name of 'Old Susian,' and many other specimens of it gradually accumulated. Subsequent investigations have shown that the writing and language found at Susa and Malamir are related to those in the second column of the trilingual inscriptions. It is now ascertained that the Old Susian is the most ancient form; and that the script and language of the second column descends from it, through the medium of the script and language found at Malamir. The Old Susian inscriptions were translated by Oppert in 1876, and those of Malamir by Professor Sayce in 1885. These documents were generally referred to kings contemporary with Sargon and Sennacherib, though others subsequently found were attributed to the fourteenth century B.C. Still later discoveries have proved that the Old Susian was in use at least as early as B.C. 3000. The origin of the 'New Susian' of the second column has thus been carried back to a great antiquity; and the existence of a very ancient population in Elam, speaking a Scythic language has been established. The relation between the Scythic of Elam and the Scythic of Southern Babylonia has not yet, we believe, been universally admitted. There are

powerful interests at work to dwarf or deny the extension and influence of the Turanian races, both in Elam and in Babylonia, and till these have been surmounted, it will be difficult to estimate correctly the exact state of the evidence.

It was not till thirty-three years had elapsed from the date of Mr. Loftus's discoveries that Susa was again visited. Upon this occasion (1885) the enterprising traveller was M. Dieulafoy, whom we have already mentioned, and it is to these two travellers that we owe nearly all we know of its Achaemenian remains. Mr. Loftus must always enjoy the honour of being the first to reconstruct the Columnar Hall, and it was he also through whom the two inscriptions of Artaxerxes Mnemon became first known. M. Dieulafoy, on the other hand, has largely increased our knowledge of Persian art by the discovery of the enamelled friezes. The service he has rendered towards the reconstruction of the buildings is more problematical, for a large portion of it depends upon the justness of the imaginative faculty, which is never a very sure guide in such matters. He found three or four bases in the central cluster of the Hall not previously excavated by Loftus; but they add nothing to our knowledge of its construction, which the earlier traveller had already fully determined. M. Dieulafoy's most successful work was achieved on the occasion of his second visit to Susa, in 1885. At first it was difficult to collect workmen, but a few deserters from the army were attracted, when it became known that the pay offered was about equal to that of their colonel. Before the end of the month nearly three hundred men were collected, and excavations were energetically pursued upon each of the three hills. A double-headed bull, broken into convenient fragments, was found in the eastern colonnade of the great Hall,

and the pavement of a terrace on the south was reached.[1] At length (March 21), large quantities of bricks and enamelled tiles were found which, when put together, formed various devices, men and animals of gigantic size, triangles of alternate blue, green and white, palm leaves and other decorative designs, evidently parts of a frieze.[2] The brilliant colours were marvellously preserved from having lain so long face downwards. Soon after, the base of a column, signed by Artaxerxes Mnemon, was found in the larger mound. Meanwhile Madame Dieulafoy supervised the collection of the enamels, and as they were pieced together the floor of her tent was gradually enlivened by the apparition of a magnificent lion set in blue turquoise.[3] Numerous repetitions of the same device were found, indicating a procession of these majestic animals. A few cuneiform letters were also met, tinted with blue. The enamels had clearly fallen from a great height, and had formed the decoration of the upper portion of a wall. It was evident also that the building they came from had been preceded by a still more ancient edifice to which some of the bricks had belonged.[4] Almost as interesting was the discovery close to their camp on the south side of the Apadana of the parapet of a staircase richly ornamented with yellow and blue lotus flowers, set in a rich green foundation.[5] The excavations conducted at two points of the Citadel Hill had as yet proved unproductive. They had occupied fifty men constantly for two months, and had only resulted in the discovery of a few bricks with Susian texts, and some fragments of cut stone. Not much more success

[1] '*A Suse*: Journal des Fouilles, par Madame Jane Dieulafoy, Officier de la Légion d'Honneur' (Paris, 1888), p. 115.

[2] *Ib.* p. 132. [3] *Ib.* p. 158. [4] *Ib.* p. 160.

[5] *Ib.* p. 167; for illustration see *L'Acropole de Suse*, par Marcel Dieulafoy (Paris, 1893), p. 298.

had rewarded their attack upon the large mound to the east. Here little was found except immense walls of crude brick and the remains of a cemetery of Parthian times. Farther search had now, however, to be postponed on account of the approach of the hot weather. On April 28 work was suspended and the treasures packed. Fifty-five cases were despatched, containing the lion frieze and the decoration of the stairs. They were, however, seized at the Turkish frontier, and all the attempts of M. Dieulafoy to smuggle them on board a French steamer were frustrated. Fortunately, the head of the lion and many small objects were hidden away in the personal luggage and thus escaped detention. The travellers got back to France in July, and were then informed that the Shah had revoked the firman and would not permit them to return. It appears that the Mollahs at Dizful had discovered that the torrential rains and threatening clouds that had lately visited the country were due to the presence of the foreigners so near the holy Tomb of Daniel. The infidels had disturbed the resting-places of the faithful and removed the talismans buried by the prophets for the protection of Susiana. It was abundantly proved that their unholy presence was always accompanied by signs of divine wrath and followed by terrible plagues. After much negotiation, however, leave to return was obtained, on condition that the French Government would waive the claim to indemnity if, as seemed probable, their agents should perish in their forthcoming visit. This singular condition was subsequently modified, and while the Shah disclaimed all responsibility for the safety of the mission, he renewed the firman for a limited time.[1] It was perhaps partly in consequence of these negotiations, and partly to stimulate the

[1] *A Suse*, pp. 194–5.

Turkish Government to surrender the fifty-five cases still in their possession, that the travellers re-appeared in the Persian Gulf on board a French man-of-war, which had not been seen in those waters for three years. On their way they stopped at Muscat, and the officers were duly entertained at the Lawn Tennis Club by the ubiquitous English.[1]

M. Dieulafoy resumed operations at Susa on December 13, 1885. The firman was to expire on April 1, and their funds were now reduced to 15,000 francs.[2] They accordingly determined to abandon the hope of a thorough investigation and to content themselves with the humbler task of filling the Museum. They now concentrated all their efforts on the Palace Hill: by the end of the year they had come upon the foundation of the Palace of Darius, which had been buried beneath the ruins of the later Palace of Artaxerxes. At this depth they made their second great discovery of enamelled tiles, bearing the design of the archers, an ornament attached to an earlier structure. It was, however, found sixty metres from the Apadana and could not, therefore, have been a portion of the decoration of the palace.[3] At a little distance, in the plain, they came upon a small Achaemenian building which Dieulafoy declared to be a covered fire temple.[4] By the middle of February the exhausted state of their finances compelled them to dismiss a hundred of their workmen. The clearance of the palace, however, continued. Several more bases were found, and another double bull, which was shattered into portable form by a stroke from the powerful arm of the lady Chevalier.[5] A sketch was also completed of the fortification for two-thirds of its circum-

[1] *A Suse*, pp. 196-8. [2] *Ib.* p. 263.
[3] De Morgan, *Recherches Archéologiques*, p. 69, *note* 5.
[4] *A Suse*, p. 309. [5] *Ib.* p. 319.

ference, a work that produces a startling effect upon the reader who looks at Plate 2. Little now remained but the task of collecting their treasures. The process of packing and superintending the removal of such weighty objects occupied the rest of their time, and when they left, at the end of March, they brought away three hundred and twenty-seven cases and forty-five tons of baggage. When the difficult journey to the coast was successfully overcome, they found a man-of-war ready to transport them safely back to France. They had acquired inestimable archæological riches, which are now to be seen among the precious collections of the Louvre. These remains of Achaemenian palaces, as they say, were not torn from some splendid ruin, but called back to life from the hidden embrace of the grave ; and they were acquired at the peril of their lives. The Susian mission waged an almost hopeless battle and came off victorious.[1] We fear, however, that a good deal of M. Dieulafoy's industry was misdirected. If a third plate were to be prepared, marking only the 'Restorations directes d'après les fouilles,' and omitting the lines indicating the 'Restorations calculées' and the 'Restitutions hypothétiques,' the reader would be surprised to see how little of the 'Acropole de Suse' remained. The great staircase ascending to the Apadana or Columnar Edifice seems to be also entirely without authority, and his most ingenious speculations are to a great extent completely overthrown by the excavations of his successor.

[1] 'Nous avons acquis, au prix d'un travail opiniâtre et d'efforts dont nul ne soupçonnera jamais l'âpreté, des richesses archéologiques inestimables. Les reliques des Palais achéménides ne furent pas arrachées à un monument superbe, mais ressuscitées des entrailles avares de la terre et conquises au péril de notre vie. En ma qualité d'historiographe des fouilles, il m'appartient de parler hautement et sans fausse modestie. La mission de Susiane a livré une bataille désespérée et la Providence aidant, elle revient victorieuse.' *A Suse*, p. 353.

Since the mission of M. Dieulafoy, a most advantageous concession has been made to France. In 1895 the Shah accorded to that favoured nation an exclusive right to carry on archæological excavations throughout the whole of his dominions. This concession was extended in August 1900, and was rendered perpetual, with the farther privilege of retaining all the artistic objects discovered.[1] M. de Morgan, who had already acquired a great reputation by his travels in Persia and his work in Egypt, was appointed in 1897 to carry on the explorations, and with the protection of a Persian garrison he began his operations in December of that year. They are still in progress, but he has been able to publish an account of his discoveries up to the spring of 1899. He has been described as the Prince of Excavators; and it is indeed a most fortunate circumstance that this work should have fallen into such unusually competent hands. He has ample time at his disposal, and sufficient means to employ no less than five hundred men at a time. He is satisfied to carry out his undertaking in a patient and painstaking manner. He has the merit of keeping his imaginative faculty under severe restraint, and we have little cause to apprehend an apparition of the airy fancies that so many of his predecessors have substituted for solid toil.

In his excavations on the site of the Apadana, he has been unable to verify the existence of the three bases belonging to the inner row of the northern colonnade. They were, however, among the first to be discovered by Mr. Loftus, and as he did not belong to the inventive group of travellers there can be no doubt they are to be found.[2] De Morgan is of opinion that the northern

[1] *Recherches Archéologiques*, par J. de Morgan, G. Jéquier et G. Lampre (Paris, 1900), vol. i. p. ix.

[2] *Recherches*, p. 79; Loftus, *Chaldæa*, p. 367.

colonnade could never have contained more than a single row of columns, on account of the nature of the ground, which, he says, would not admit of more. His careful excavations between the central group and the lateral colonnades have proved the entire absence of any foundations upon which a solid structure could rest. It is clear, therefore, that the building could never have been enclosed by brick walls, adorned, as so commonly supposed, by enamelled designs. The theory supported by the Book of Esther that it was protected only by hanging curtains gains, therefore, probability, though we do not see that the supposition of its having been surrounded by wood is excluded. Below the foundations of Artaxerxes he found farther remains of the earlier edifice of Darius. Among these were the round base of a column and part of a bull-headed capital.[1] Elsewhere, lying at a still greater depth, he came upon a fluted column of a style entirely different from those in the more modern edifice. His investigations on the southern side have dispelled any hope of finding a sculptured staircase as at Persepolis.[2]

His discoveries have contributed largely to widen the range of information concerning the ancient civilisation of Susiana. He has found upwards of eight hundred bricks bearing the inscriptions of various Elamite kings and patesis written in the Old Susian language; some of these are said to go back to B.C. 3000, or earlier, and a few of them are written, according to M. de Morgan, in Sumerian and others in Semitic. Besides bricks, a bronze bas-relief, and a few archaic tablets and a stele with Susian inscriptions have also been discovered. Other objects not of Elamite origin have been met which it is reasonable to conclude were captured in the course of successful raids. They go

[1] *Recherches*, p. 72. [2] Tranchée 12.

back to the earliest days of Babylonian history. One is an obelisk of a King of Kish who lived, it is said, so far back as B.C. 3850.[1] Another is a bas-relief of the famous Naram Sin carried off from Sippara; a third is a brick of the same king, a possible indication that he was at one time the suzerain of the country, and contributed to the embellishment of its temples. In addition to these, many boundary stones have been found, all relating to land in Chaldaea belonging to the late Cossaean period, which prove how successful the Elamites continued to be in removing their neighbours' landmarks.[2]

Perhaps of greater interest is the glimpse these excavations have afforded of a still more distant past. M. de Morgan found that the Citadel Hill has reached its present altitude of one hundred and twenty feet above the plain entirely by the accumulation of deposit left by successive generations of settlers.

He sank a series of mines of considerable length into the side of the hill, and at various depths, down to 24·90 metres below the surface. The Achaemenian remains reach no farther down than 4·50 metres, and this stratum represents a period extending over 2,500 years. If we assume a similar rate of deposit for the remainder we arrive at more than B.C. 12,000 for the date of the lowest stratum examined. It is very remarkable that it was precisely at this depth, representing in any case an extremely remote period, that he found the most finished pottery, adorned with the most perfect artistic designs; and these, he has no doubt, could not have been produced except in a high state of civilisation.[3] There is some resemblance between these objects and others recently found in Egypt and ascribed to

[1] See Chronological Tablet in Radau, *Early Babylonian History*, p. 30.
[2] *Recherches*, pp. 145 and 165. [3] *Ib.* p. 183. Gallery B.

B.C. 6000.[1] This early civilisation seems to have been swept away by the invasion of a people in a much less advanced condition, who occupied the country for a long period of time;[2] it is not till these had disappeared and we ascend to a level of 12·95 metres below the surface that we come to the beginning of the Elamite deposit. It has a thickness of from eight to nine metres, which, according to our estimate, would require about five thousand years to form. It was in this stratum, between 4·50 and 12·95 metres below the surface that he made his principal discoveries. Here he came upon the walls of Elamite palaces and temples, which have enabled him to show that the method of decoration by means of enamelled brick of exquisite colour and design was extensively practised. The quantity of carbonised material leads to the conclusion that wood was largely employed in the construction of these edifices; and the remains of columns prove that the Persians derived their idea of columnar architecture direct from their predecessors. The inscriptions so recently found are still in the hands of Father Scheil, who is now engaged in the work of decipherment. They show, he says, the influence of Semitic speech in Elam at an early period, and the advocates of the antiquity of Semitic civilisation begin to hope they may still have occasion to rejoice.

Very few other inscriptions remain for us to notice. Before the end of the eighteenth century a vase of Xerxes was discovered in Egypt containing a trilingual inscription translated into Egyptian hieroglyphics. It was described by Caylus (after whom it was named), and was long the object of much learned curiosity (Inscr. Q^a). Another inscription was found near Suez, in A.D. 1800, and published in the 'Travels of Denon,' in 1807. It

[1] *Recherches*, pp. 187–8. [2] Galleries C and D.

contains a legend of Darius, and appears to have belonged to a larger monument, afterwards partly recovered, but which has since been entirely destroyed. It was engraved upon a stele and was also quadrilingual: having three cuneiform inscriptions on one side and the Egyptian hieroglyphics on the other. On the Persian side were two human figures with their hands resting upon three cartouches. To the right was the Persian, to the left the Susian, and below the Babylonian text, with the legend 'Darius the great king, king of kings, king of lands, the king of the wide earth, son of Hystaspes the Achaemenian.'[1] Below, occupying the whole face of the stele, was the longer inscription in twelve lines with the Persian on the top and the others under. Nearly the whole of the Susian was lost, and only a few letters of the Babylonian remained.[2] It begins with the long introductory form, and Darius goes on to say that he has conquered Egypt; and commanded a canal to be dug from the Nile to the 'sea which is in communication with Persia.'[3] It seems to say that the king ordered the half of the canal toward the sea to be destroyed.[4] It is supposed that this was done in accordance with the advice of the engineers who thought the Red Sea was above the level of the Mediterranean (Inscr. S^z). Two other inscriptions have also been found in Egypt: one on a crystal cylinder now in the British Museum and first described by Grotefend in his 'Neue Beiträge' of 1840. It represents Darius in the act of killing a lion. The king is standing upright in a chariot with the tiara upon his head, and carrying a bent bow in his hand. Above him is the winged figure, and in the background a trilingual

[1] Menant, *Les Achéménides*, p. 146. [2] Oppert, *Records*, O.S. ix. p. 81.
[3] Spiegel, *Die Altpersischen Keilinschriften*, p. 53.
[4] Oppert, *Le Peuple des Mèdes*, p. 215. Quoted by Spiegel, p. 117.

inscription with the legend 'I [am] Darius the king.' The other occurs upon a vase of grey marble, and like the one of Caylus, it is quadrilingual. It was first made known by Longpérier in the 'Revue Archéologique' (1844), through an imperfect copy taken by the Abbé Giacchetti, but a complete transcript was afterwards sent by Sir Gardner Wilkinson to Rawlinson. It reads simply: 'Artaxerxes the great king.' It is known as the Venice vase, and is preserved in the Museum of St. Mark's (Inscr. Q^b). A few other vases were afterwards found at Susa and at Halicarnassus, but they all repeat the same legend as that found upon the Caylus vase. A short inscription of Darius, containing the long introductory form already described, is also mentioned by Gobineau as having been found near Kermanshah.[1] Two unilingual inscriptions, one of Arsaces and the other of Pharnuches, were also afterwards found on seal cylinders which, with the trilingual of Darius in the British Museum (N^a) raise the number to three in all.[2]

[1] Menant, *Les Achéménides*, p. 143.

[2] Benfey, *Die Persischen Keilinschriften* (1847), p. 68; Spiegel, p. 129; *Records*, O.S. ix. 87.

CHAPTER III

DECIPHERMENT OF THE FIRST OR PERSIAN COLUMN—TYCHSEN TO LASSEN, A.D. 1798–1836.

We have already called attention to the important services rendered by Niebuhr to the study of the cuneiform inscriptions. The copies he made at Persepolis were by far the most accurate that had hitherto appeared, and the scholars who first applied themselves to the difficult task of decipherment worked chiefly upon them. He pointed out, that the inscriptions generally occur in groups of three columns, and that in each the cuneiform signs are different. He pointed out also that the three different systems always recur in the same definite order: the signs characteristic of the first, second and third columns in one inscription always correspond to those of the first, second and third columns in the others. He observed also that the signs characteristic of the first column are evidently much simpler than those in the other two. After a careful comparison of the various places where they are found, he remarked that they were limited to forty-two in number; and these he collected and published together in his Plate 23, where they occupy a position that might at first sight lead the reader to suppose that they formed a part of the ornamentation of the sculptured staircase.[1] This is the first cuneiform alphabet ever published, and it was not the least important

[1] Niebuhr (C.), *Voyage en Arabie*, ii. 106.

service rendered by Niebuhr to the study. Its formation was not so simple as might be supposed, and it would have been difficult to accomplish it except by a minute study of the monuments themselves. The inscriptions had hitherto been so imperfectly copied that no mere collation of them, however carefully made, could have succeeded in eliminating the whole of the faulty signs arising from the errors of the transcriber. The accidental addition or omission of a wedge, or an alteration in its direction, had the effect of magnifying the apparent number of the letters. It is a singular proof of the accuracy of Niebuhr's judgment that he should have been so successful in this first attempt to distinguish between the genuine and the defective letters. In his list of forty-two signs, he has only introduced nine that are not true letters, including the sign that was afterwards found to be the mark of separation between the words.[1] On the other hand, amid all the conflicting signs found in the copyists, he passed over only two that are genuine: one () is included by Grotefend in his list of defective signs; the other () was first added to the alphabet by Rawlinson.[2] It proved of great advantage to concentrate the attention of scholars upon signs that were for the most part genuine, and to save them the dissipation of energy that would have resulted if they had been left to wander unguided among the inscriptions themselves. Niebuhr rendered a farther service by separating each group of wedges that formed a letter by a colon, an idea he copied from the Zend; and the eye thus soon becomes accustomed to recognise the complicated combinations

[1] See Appendix A. The defective letters are Nos. 1, 3, 6, 8, 17, 20, 30, 37 and the diagonal No. 2.

[2] *Cf.* the alphabets. Spiegel, *Altpersischen Keilinschriften* (Leipzig, 1881), pp. 142, 144, 159.

that belong to each other. While he contributed so much to the correct apprehension of the alphabet, it is singular that he never remarked that the words themselves are regularly separated from each other by a diagonal wedge.

This fundamental fact also escaped the notice of Tychsen, who was the first to make a serious attempt at decipherment. Tychsen's family was of Norwegian descent, but he was born in the small town of Tondern, in Schleswig Holstein, in 1734. Although of humble origin, he was sent to the University of Halle, where he early acquired a taste for Oriental languages. He was appointed a lecturer in the University of Bützow (1760) and subsequently transferred to the more important post of librarian and curator of the Museum at Rostock (1789). He attained a great reputation by his knowledge of Hebrew and Rabbinical archæology ; and he was the first to lay the foundation of modern Biblical criticism. His Oriental studies embraced Arabic and Syriac ; and he also wrote on the Cufic inscriptions preserved in Venice and London. His works include six volumes of archæological papers, which he calls 'Pastimes of Bützow,' 'A History of the Rostock Library' (1790), and two treatises on Arabic and Syriac (1791 and 1793). He is also mentioned as having written a treatise on Zoroaster. His opinions on cuneiform are contained in a curious tract entitled 'De Cuneatis Inscriptionibus Persepolitanis Lucubratio' (1798). He agreed with Niebuhr that the inscriptions are to be read from left to right, and that the three columns contain three different kinds of writing, which he thought concealed three different languages, probably the Parthian, Median and Bactrian.[1] He recognised that the characters in the

[1] Tychsen (O. G.), (Rostock, 1798, 4to) p. 5.

first column are by far the simplest, and it is on them that he fastened his attention. By some means which he has failed adequately to explain,[1] he professes to be able to transliterate the cuneiform signs, and he has gratified the curiosity of the reader by presenting him with a table showing the values he has found for a great variety of signs, among which he admitted several that are defective. He saw that more than one sign may be used for the same sound; and he assigned four each to the letters *l*, *r*, *s* and *x*. Conversely, he thought that the same sign might express the most diverse sounds. *E*, *n*, *t*, are given as the different values of a single sign, No. 5 (). *B*, *k*, *r*, and *b*, *x*, *y*, are assigned respectively to two others, Nos. 27 () and 31 (); while two different values for the same sign are quite common. Like many of his successors, he recognised a profusion of vowels, and he has allotted nine different signs to his three forms *a*, *ä*, *ă*. It is scarcely surprising that out of the nine, one turned out to be correct, No. 21 (); and of the four signs he allotted to *s*, one was correct, No. 38 (). He was also successful in detecting the signs for *d* and *u*: but as his system was based upon no intelligible principle, these results were purely accidental, and could not afford a guide to future inquirers.[2] Having succeeded to his satisfaction in finding known equivalents for the unknown signs, and being thereby enabled to transliterate the cuneiform text, the next step was to endeavour to make some sense of it. This he sought to do by comparing the singular words that resulted from his system with those of languages he thought must be the most nearly allied, such as Zend,

[1] Tychsen, pp. 22–6.

[2] See Appendix A, which shows the letters of the cuneiform alphabet arranged according to Niebuhr's list, and the values Tychsen has assigned to each. The numbers preceding the letters in the text refer to the numbers of the letters in Niebuhr's alphabet.

Pehlevi, Chaldee, Arabic, Syriac and Armenian.[1] He failed to recognise fully the intention of the diagonal wedge, so that upon some occasions he rendered it by the conjunction 'and.' He had, however, the merit of pointing out that a particular group of seven cuneiform letters were continually recurring, often followed by the same group with three or four other letters added to the termination. These are enclosed by diagonal wedges, and we now know they are single words, the simplest form being the nominative singular of 'King,' and the two longer the same word with the addition of the genitive singular and the genitive plural terminations. But Tychsen had no suspicion, at this time at least, that the letters occurring between the diagonals must be treated as one word,[2] nor that the terminal variation was a grammatical inflexion. Accordingly he makes the simple form of seven letters represent two words, which he transliterates and translates Osch Aksak, 'is Aksak'; and the two longer groups he treats as three words—Osch Aksak yka, 'is Aksak divus,' for the first; and Osch Aksak acha, 'is Aksak perfectus,' for the second.[3] The personage named Aksak, whom he had thus evolved, he took to be Arsaces, the founder of the Parthian dynasty; and he accordingly found himself compelled to attribute the inscriptions and monuments to that comparatively late date.[4] Tychsen's efforts at translation were exhausted by his rendering of the B and G Inscriptions of Niebuhr both of which he found to belong to Aksak; but he has transliterated the Inscriptions A, H, I, and L, for the benefit of other scholars who may wish to read some

[1] Tychsen, p. 27.

[2] He made this discovery afterwards, either independently or else he accepted it from Münter. See Heeren, *Historical Researches* (Eng. ed. 1846), ii. 329.

[3] Tychsen, pp. 29–30.

[4] *Ib.* pp. 17, 22.

meaning into them. The curious feature of his system is that some of his letters actually turned out to be correct, such as his *a*, *u*, *s*, or *sch*. But as these results are purely accidental he cannot be allowed to have made any real contribution to cuneiform decipherment.

Immediately after the appearance of his tract, it was assailed by Witte, a professor of his own university, who seized that occasion to revive the old view of Dr. Hyde that the cuneiform characters were simply designed as a fantastic ornamentation and had no other signification.[1] On the appearance of Grotefend's system, Tychsen had the singular magnanimity to abandon his own and he became one of the principal exponents of the theories of the younger scholar.

In the same year (1798) that Tychsen published his 'Lucubratio,' a paper on the same subject was read before the Royal Academy of Copenhagen, by Dr. Münter. Münter's father, who was a clergyman and a poet, was born at Lübeck and died at Copenhagen, where he was pastor of the German church. His son Frederick was born at Gotha, in 1761, but his youth was passed at Copenhagen, and many of his works were written in Danish and subsequently translated into German. Like his father, he entered the Church, and became a Professor of Theology at Copenhagen, and eventually rose to be the Bishop of Seeland (1808). He was a very prolific writer, especially upon theological subjects. His works include a 'History of Dogma' (1801), a 'History of the Danish Reformation' (1802), and the last, which is considered to be the most important, was on the 'Symbols and Works of Art of the Early Christians,' published in Altona, 1824. He also acquired considerable reputation as a philo-

[1] Münter (F. C.), *Versuch über die keilförmigen Inschriften* (Kopenhagen, 1802, 8vo), p. 8.

logist and Orientalist. His paper on the Cuneiform Inscriptions was published in Danish in 1800, and translated into German in 1802. It was not till then that it became accessible to the general reading public, and very soon afterwards M. de Sacy noticed it in the 'Magasin Encyclopédique.'[1] Münter had long been in correspondence with Tychsen on the subject of their common studies; but the two scholars arrived at widely different results. While the latter invented a system of interpretation that enabled him to transliterate the inscriptions with comparative facility, the former could not admit that the solution of the difficulty rested upon any satisfactory basis. His own contribution, if much more modest, is not on that account less valuable.

Münter, in the first place, rendered important service to his successor, Grotefend, by sweeping away the foolish conjecture that the inscriptions belonged to the Parthian age, and with it the misleading inference that the name of Arsaces was to be sought for among them. In a few masterly pages, remarkable alike for wide knowledge and accurate judgment, he showed that Persepolis could only be referred to the Achaemenian kings, an opinion that had already gained the support of Heeren, in opposition to the authority of Herder, who ascribed it to the mythological age of Jamshid.[2] It might be thought that the claims of Darius or Jamshid to be the founder of Persepolis would not give rise to heated discussion; yet in the beginning of last century the tranquillity of Göttingen was convulsed by the fierce controversy that raged between the two learned advocates of the rival theories.[3]

[1] *Magasin Encyclopédique*, rédigé par A. L. Millin, Year IX, vol. iii.

[2] Münter, p. 25.

[3] Heeren(A. H. L.), *Historische Werke*: 'Ideen über die Politik' (1824), xi. 407.

Münter did not profess to be able to transliterate and still less to translate the inscriptions. His pretensions were limited to a very tentative endeavour to assign values to thirteen characters; and of these, four were not derived from Niebuhr's list, and they turned out to be merely errors of the copyist. Having fixed the date of Persepolis and presumably therefore of the inscriptions, he inferred that the language must be closely allied to the Zend or the Pehlevi. He made a minute investigation of all the cuneiform inscriptions that were known in his day in Europe, and studied Kaempfer and Le Bruyn with the same attention as he studied Niebuhr. He accepted Niebuhr's division of the Persepolitan inscriptions into three different kinds of writing; and he conjectured that the first was alphabetical, the second syllabic, and the third ideographic. The latter he thought bore some resemblance to Chinese. He saw that the language of the first column admitted of too many vowels to be closely related to the Pehlevi. He was, on the whole, disposed to think that the three columns contained translations of the same text into different languages, which might probably be Zend, Pehlevi and Parsi.[1] On this point, however, he did not consider the evidence sufficient to exclude all doubt. Indeed, he said the three columns might turn out to be in the same language, expressed in different characters.[2] He studied carefully the inscriptions that occur on vases, cylinders and bricks from Babylon, a few of which were then beginning to find their way to the European museums and the private collections of Sir W. Ouseley and Mr. Townley. The most important of these was upon the vase described by Caylus, which,

[1] Münter, pp. 85, 106, 123.

[2] P. 123; but *cf.* p. 87, where he pronounces more definitely for different languages.

in addition to the cuneiform inscription, was also inscribed with Egyptian hieroglyphics.[1] Tychsen pronounced the latter to be Phoenician, and he believed that the urn itself had formerly contained the ashes of his friend Aksak.[2] Münter made the more important remark that the characters on the Babylonian relics were nearly identical with that of the third Persepolitan column.

Meanwhile, he devoted his attention exclusively to the simplest form of writing, which is found in the first column; and he speedily recognised that the diagonal wedge which occurs so frequently was evidently intended to separate one word from the other. He compared it to the cypress tree that divides the groups in the procession on the sculptured staircase seen at Persepolis; and adds that in one of the old Hindu alphabets the words are similarly separated by a small oval.[3] This discovery, now announced for the first time, had till then escaped the observation of Tychsen, who, it will be remembered, fancied he found three different words enclosed within the same diagonals. In order to find values for the cuneiform letters, he had recourse to a twofold method. He sought out the signs that recurred the most frequently and that were the most uniformly repeated in the same word, for he concluded that these would naturally turn out to be vowels. He soon identified three in particular ( ,  , ) that were constantly recurring: the first in almost every word, and occasionally several times in the same word.[4] In the inscriptions analysed, he found that the first was repeated 183 times, the second 146, and the third 107 times.[5] He then proceeded to compare the forms of

[1] *Recueil d'Antiquités*, vol. v. Pl. 30; for the Babylonian bricks, Millin, iii. 20.

[2] Münter, p. 78.

[3] *Ib.* p. 113.

[4] *Ib.* p. 105.

[5] *Ib.* p. 106, *note.*

these letters with those of the vowels in other kindred languages; and he thought he discerned a strong resemblance between the first and third in the Zend character for *a* and in the Armenian for *o*.[1] He could not find a letter anywhere that resembled the second. However, he observed another cuneiform sign that also recurred with great frequency (𐎠𐏁), and which might easily bear comparison with the Zend letter for *a* long.[2] A likeness between a defective cuneiform sign (𐎠𐎲) and the Zend letter for *i* gave him a fourth vowel. Similar considerations led him to assign the values of *ou w ii y* to another sign (𐎢), a conjecture that turned out to be less happy than that of Tychsen, who accidentally hit upon its correct value, *s*. Münter had now pointed out six signs he thought expressed vowels (viz. 𐎡 *e* or *a*, 𐎲𐎠 ?, 𐎣 *o*, 𐎠𐏁 *a*, 𐎠𐎲 *i*, 𐎢 *ou*, &c.). The second he dropped out of his alphabet, for after careful search he could find no letter in any other alphabet to give him a clue to its value. The fifth was not a genuine letter; and of the four that remained two were, as he surmised, vowels (Nos. 1 and 3). The other two were both consonants. Only one of the former—the first. *a*—was found to be correct; but it had already been recognised by Tychsen. The other—the *o*—was afterwards found to be *i*. He also identified seven other signs with the consonants *p*, *kh* (two), *r*, *r* strong, *s* and *b*, which he obtained by the simple process of comparing them with other letters found in Zend, Armenian and Georgian, to which they had 'no small similarity.'[3] Three of the signs he selected were not genuine; and of the four others the only one that was correct was *b* (𐎡𐎲). His efforts in this direction were

[1] Münter, pp. 105, 109.

[2] *Ib.* p. 114.

[3] *Ib.* p. 117.

thus limited to finding correct values for two signs (*a* and *b*).[1]

Like Tychsen, he was attracted by the frequent repetition of the word of seven letters. In one short inscription it may be found five times, and it is repeated at least twenty-eight times in the inscriptions copied by Niebuhr. He also observed that the same seven letters occur frequently with a terminal addition of three or four other letters, and this word is immediately preceded by the simpler form in seven letters. He concluded that the additional letters must be an inflexion: not, as Tychsen thought, an independent word, such as 'pius' or 'perfectus.' Münter confessed his inability to read the word, but he regarded it as the key of the whole alphabet.[2] His first impression corresponded with that of Tychsen, in so far as he supposed it to be a proper name.[3] But its recurrence so frequently seemed to discredit this supposition, particularly as no name of any king of the Achaemenian dynasty appeared to fit into seven letters.[4] Then he assumed it must be a title, possibly 'king of

[1] Münter's consonants are:

P	4		wrong
Kh	11		wrong
Kh			defective
R	3		defective
Strong R	16		wrong
S			defective
B			right

his vowels:

E or A	21		right A
A	23		wrong
I			defective
Ou &c.	38		wrong
O vocal	12		wrong
O			defective

[2] Münter, p. 125.

[3] 'Aber selbst die Flectionen, die mir überall im Wege standen, mussten ich in meiner Erwartung, hier nomina propria anzutreffen, immer ungesser machen, und dadurch musste ich auch immer mehr davon abgeschreckt rden in dem Wort mit den 7 Buchstaben einen Königstitel zu suchen.' . p. 127.

[4] *Ib.* p. 126.

kings,' and in that case he clearly saw that the preceding word must be the name of the king. Here he had got on the right track, for the word does in fact signify 'king,' and the one that precedes it, at the beginning of the inscriptions, was afterwards found to be the royal name; but he ultimately rejected this explanation, because in Niebuhr's Table A it followed a word of two letters, which could not possibly express the name of any of the Achaemenian kings. The passage he refers to happens to be erroneously copied, for a diagonal wedge has been introduced where there should be a letter, and Münter was misled by this unfortunate mistake. He thus abandoned an hypothesis that, if persevered in, might have led to some result. He may also have thought that the word of seven letters was too long to be simply 'king,' and consequently he made the unfortunate guess that it signified 'king of kings.' This assumption stood greatly in the way of his arriving at the correct meaning. The truth is that the two words already referred to as occurring together are required to make up the signification of 'king of kings,' the second being merely a repetition of the first with the addition of the genitive termination, corresponding to 'rex' and 'regum.' Münter could derive no assistance from a Zend grammar, for at that time none had been written.[1] What information he collected by his own study afforded him no help in the present matter. According to his transliteration, he knew three out of the four letters with which the longer word terminates: these were *e*; an unknown sign, possibly a *j*, followed by *ea*; but Zend could not guide him to the signification of the inflexion 'ejea.' The transliteration was at fault, for the four letters are really 'anam,' which corresponds exactly to the Zend

[1] Münter, p. 118.

genitive plural. To be thus baffled when so near the truth is a curious illustration of how completely even an exceptionally keen inquirer may fail to recognise what might seem self-evident. With the very phrase 'king of kings' constantly present to his mind, it never struck him that two words occurring one after the other, and differing in only what he recognised to be an inflexion, were precisely the 'king of kings' he was in search of.[1]

In this dilemma De Sacy suggested that the word or words were probably a religious formula, such as an invocation of God or the Ferhouer, and this opinion gained confirmation by its occurrence on cylinders and bricks which Münter had no doubt were inscribed with magical incantations. He was thus led far away from the true solution.[2]

Münter made a careful study of the words that showed a change of termination, and he drew up a list of seven of the most common inflexions.[3] The two last in this list are the ones added so often to the enigmatical word he vainly sought to read, and which are, as we now know, the signs of the genitive singular and plural.

His inquiries did not pretend to go beyond the first or simplest species of writing, but he took occasion to point out the signs in the second and third columns that correspond to the word of seven letters. Their identification, he argued, is indisputable, for when the word occurs twice in succession in the first column the corresponding signs are similarly repeated in the second and third; and their restricted form clearly indicates that they must be syllabic or ideographic.[4]

The Persepolitan inscriptions were now tolerably

[1] Münter, p. 128.
[2] *Ib.* p. 140.
[3] *Ib.* p. 120.
[4] *Ib.* p. 90.

well known to persons interested in such matters, by the plates of Le Bruyn and more especially by those of Niebuhr. But the inscriptions from Babylon had only just begun to attract notice. So far back indeed as the beginning of the seventeenth century Della Valle, as we have seen, had sent a few inscribed bricks to Rome, but they had received little attention.[1] Later travellers do not appear to have mentioned the existence of these curious relics till the end of the eighteenth century, when Père Emanuel, a Carmelite, who resided at Bagdad, gave a description of them in a manuscript referred to by D'Anville in the Memoirs of the Academy of Inscriptions.[2] Soon afterwards the Abbé Beauchamp, in his account of Hillah, says he found 'large and thick bricks imprinted with unknown characters, specimens of which I have presented to the Abbé Barthélemy.'[3] His account excited some interest, and it was translated into English in 1792, and also into German by Witte of Rostock. Several of the bricks were deposited in the National Library at Paris, and plaster casts of them were sent to Herder and Münter. Shortly afterwards the same collection was enriched by the Egyptian vase already mentioned, which Count Caylus had discovered, and which he described in his 'Recueil d'Antiquités.'[4] About the same time also various cylinders and bricks found their way to different European museums and private collections. Drawings of a few of these were also to be found in Caylus; and in 1800 Münter published two others from Babylonian bricks that had not seen the light before.[5]

[1] See above, p. 24.

[2] Vol. xxviii. Hager's *Dissertation*, p. xv, *note*.

[3] *Journal des Savants*, 1790.

[4] Vol. v. Pl. 30. See *J. R. A. S.* xi. 339.

[5] Münter, Pl. 2, figs. 1 and 2.

Meanwhile the directors of the East India Company gave instructions to the Resident at Bussorah to secure ten or a dozen specimens for their museum (1797). They said they had heard that near Hillah 'there exist the remains of a very large and magnificent city, supposed to be Babylon, and that the bricks contain an indented scroll or label in letters totally different from any now made use of in the East.'[1] The bricks reached London in 1801, and the task of copying and describing them was entrusted to Joseph Hager. Hager was a curious specimen of the wandering scholar, and he enjoyed a reputation that appears to have been quite out of proportion to his acquirements. He was of Austrian descent, but he was born at Milan in 1757, and died at Pavia in 1819. He early took to the study of Oriental languages, and especially Chinese. He roamed about Europe, visiting all the libraries from Constantinople to Madrid, and from Leyden and Oxford to the south of Italy. He wrote both in Italian and German, and apparently also in English and French. One of his first works was in German on a Literary Imposture (1799), and he became known in England as a contributor to Ouseley's Oriental Collections, and by a book on the 'Elementary Characters of the Chinese' (1801). It was in this year that his Memoir on the Babylonian Inscriptions was written, and shortly afterwards he settled in Paris, and was commissioned by Napoleon to compile a Dictionary of Chinese in Latin and French (1802). For this he was to receive 6,000 francs a year; but after some time a suspicion arose as to his qualifications and industry. The result of an inquiry was that he was removed from his post, and he left France in 1806. We afterwards find him a teacher of German at Oxford,

[1] Hager (Joseph), *Dissertation on the Newly-Discovered Babylonian Inscriptions* (London, 1801), p. xvi.

and in 1809 he retired to Pavia to fill the chair of Oriental Languages. He wrote several books on Chinese, including a Grammar, a Prospectus of a Dictionary, a 'Panthéon Chinois,' and the like; but they were severely handled by the most competent critics. He, however, accomplished his work on the Inscriptions with a fair degree of merit. He began by publishing one of them in the 'Monthly Magazine' (August 1801) without note or commentary. It fell into the hands of a M. Lichtenstein, and gave rise to a very foolish essay, to which reference will shortly be made. Next year Hager published the others, accompanied by a learned Dissertation on the subject.[1] He pointed out, as indeed had been already done by Münter, that the characters on the bricks are 'formed of nearly the same elements and nail-headed strokes' as at Persepolis; but he showed for the first time that the system of writing must have originated among the Chaldaeans, who 'were a celebrated people when the name of the Persians was scarcely known.'[2] He considered that many ancient alphabets were derived from the cuneiform, even including Devanagari, the oldest Sanscrit character, which was popularly ascribed to Divine revelation.[3] He finds many of the Babylonian characters the prototypes of Samaritan or Cuthéan, and the similar Phoenician letters. Finally he shows with striking effect the wedge-like and angular origin of our own alphabetical system.[4] He called attention to the ancient custom of cutting inscriptions upon pillars and columns, and he considers it natural on that account to find that 'the writing of the ancients was perpendicular rather than horizontal, columns and pillars being much fitter for the former manner of writing

[1] See Millin *Magasin Encyclopédique* (Year IX), ii. 36.
[2] Hager, p. xviii.
[3] *Ib.* pp. xix. 40–41.
[4] *Ib.* pp. 20, 37, 40, 48.

than for the latter.'[1] Such at least was the direction of the Egyptian, Ethiopian and Chinese. On account of the absence of stone in Babylon, it was necessary to substitute bricks, and we learn from Clement of Alexandria that Democritus took his treatise on Morals from an inscription written on a brick column.[2] The columnar origin of writing is perhaps the reason that the inscription on the Babylonian bricks is, as Hager asserts, 'perpendicular rather than horizontal,' an opinion he thinks he can prove by the gems he has studied. Various conjectures as to the subject of the legend on the bricks had been put forward. Münter and Grotefend thought it was a talisman;[3] others that it recorded some historical event or an astronomical observation; but Hager suggested that the subject was probably the same as that on the Roman bricks: that is to say, that it recorded the name and the place of the maker—a suggestion that turned out to be very nearly correct. He had no doubt that the writing was the same as that discussed by Democritus in his lost treatise, and which is referred to by many of the classical writers.[4] He considers that it is ideographic, 'for we find single groups composed of abundance of nails, like the various strokes in the Chinese characters, all different from each other and different from the Persepolitan.' Nor does he consider that they were developed from hieroglyphics, but deliberately 'formed and combined by an arbitrary institution, and designed to express, not letters nor syllables, but either whole sentences or whole words.'[5] Finally he suggests that the Persepolitan mode of writing was directly derived from the Babylonian by simply laying the perpendicular inscription

[1] Hager, p. 50. [2] Millin, *loc. cit.* p. 46.
[3] Dorow, *Die Assyrische Keilinschriften erläutert* (Wiesbaden, 1820), p. 25. [4] Hager, pp. 60–1. [5] *Ib.* pp. 53, 56.

upon its side; by that means the heads of the wedges that were originally at the top are now all turned to the left, and the inscription that was originally read from top to bottom becomes by its changed position always read from left to right. 'If we turn our perpendicular characters in such a manner as to make them lie in a horizontal direction, the effect will be exactly what takes place in the Persian writing.'[1] This is a remarkable anticipation of a much later discovery.

Hager's book was still going through the press when another important inscription was added to the Paris Library (1802). It is on a stone found by M. Michaux at Tak Kasra below Bagdad. The Vase of Caylus and the Caillou Michaux continued for a time to be the two most celebrated samples of the Persepolitan and Babylonian styles in Europe. Later on, the Persepolitan collection was enriched by the discovery of the 'Suez Stone,' published in the 'Travels of Denon,' in 1807. But all these were entirely eclipsed by the long inscription found at Babylon and sent by Sir Harford Jones to the India House. It was long known simply as the India House Inscription, till later knowledge proved it to be the Standard Inscription of Nebuchadnezzar. Shortly afterwards (1808) the Library of Trinity College, Cambridge, received an inscription from Sir John Malcolm of which we hear little till a much later period.

We have said that an inscription published by Hager without commentary in 1801 fell into the hands of Lichtenstein, who made it the subject of a Memoir published in the 'Brunswick Magazine.'[2] This eccentric writer put forward the theory that the bricks

[1] Hager, pp. 52, 62.

[2] See Millin (Year VIII), v. 441. It was reprinted at Helmstadt, 1803, 1 vol. 4to.

concerning which so much noise was being made were in fact not older than the seventh or eighth century A.D., and that the characters bore a 'striking resemblance' to Cufic.[1] Nothing more was necessary than to remove the arbitrary additions of unnecessary wedges, in order to detect the Cufic symbols they concealed. Unlike most other scholars, he chiefly studied the Babylonian bricks and the most complicated of the Persepolitan systems; and he regarded an entire group of characters as only one letter. Having reduced it to the necessary simplicity by simply dropping out all the inconvenient wedges till he could discover something that suggested the appearance of a Cufic letter, he was enabled to draw up an alphabet by which he read all the cuneiform inscriptions with the greatest ease.[2] He then discovered that the language was an ancient form of Arabic and should be read from right to left. He was quite surprised that Hager should have been so deluded by wild dreams of Belus and Semiramis that he failed to see that his bricks 'contained only a few miserable sentences in Arabic.' What the Arabic words really were he did not consider it necessary to disclose to the public, but he communicated a few of them to De Sacy, who pronounced that they were not Arabic at all. Lichtenstein was good enough to translate Hager's brick, and found that it was a prayer; from thence he passed on to Niebuhr's inscriptions, and selected the difficult specimens (C, E, and L, Pl. 24). From C he obtained the most astonishing result. The words ran as follows: 'The King, the Sovereign, Prince of all Princes, the Lord Saleh, Jinghis, son of Armerib, governor-general for the Emperor of China, Orkhan Saheb.'[3] Encouraged by this striking success, he next took in hand the long

[1] De Sacy, in Millin, *ib.* p. 450.
[2] *Ib.* p. 453.
[3] *Ib.* p. 443.

inscription on the Caillou Michaux. It was written, he says, in Armenian, and contains an exhortation addressed by a priest of the 'Temple of the God of the Dead' to certain women mourning their departed friends.[1] De Sacy, from whom our information is taken, gives more than a page of this pious effusion, which he says is not more than a sixth part of the translation. It is needless to say that the whole is a pure invention. Indeed it does not clearly appear whether the Memoir was intended by Lichtenstein as a *jeu d'esprit*, or whether it was simply an impudent imposture. It is certainly curious that he succeeded in getting himself treated seriously. Besides the solemn review and confutation by De Sacy from which we quote, we find so late as 1820 that Grotefend still thought it necessary to combat his theories, and De Sacy even at that period classified together 'the conjectures of Lichtenstein and the labours of Grotefend' as equally open to suspicion.[2]

We now come to the scholar to whose ingenuity we owe the first real success that was achieved in deciphering the cuneiform letters.

George Frederick Grotefend was born at Münden, Hanover, in 1775. He was sent to the University of Göttingen in 1795, where two years later he obtained a tutorship. He applied himself to the study of philology under Heyne, and in 1803 he became Pro-Rector. Soon afterwards he was transferred to the Gymnasium of Frankfort on the Maine; and in 1821 he became Rector of the Lyceum at Hanover, where he died in 1853. He was always an industrious student, but he failed in

[1] Millin, pp. 445–7. The Michaux Stone, as is now well known, is a Kudurru, or landmark, of which class it is still the oldest specimen. It dates from B.C. 1120, and being chiefly an inventory of effects and measurements, the difficulties of its translation have been only recently overcome. See Maspero (G.), *Dawn of Civilisation* (Eng. ed. 1894), p. 762.

[2] Letter to Dorow, *Die Assyrische Keilinschriften* (1820), pp. 28, 59.

after life to follow up his first great success; and if it had not been for it, his name would probably never have been known. In 1817 he published a Latin Grammar, which was translated into English under the supervision of Dr. Arnold; and subsequently he did some useful service by his inquiries into the early Italian languages. In 1835 he published a book on the Rudiments of the Umbrian, and, in 1837, another on the Oscan, and these were followed in 1840 by a Geography and History of Ancient Italy. The paper on the Cuneiform Inscriptions that first brought him into notice was read before the Göttingen Academy on September 4, 1802; and, curiously enough, at the same sitting Heyne first called attention to the Greek inscription on the Rosetta Stone, from which the reading of Egyptian hieroglyphics takes its departure.[1]

Grotefend himself informs us that he had no special knowledge of Oriental languages,[2] and many of his critics, who were probably quite as ignorant as himself, took care that the fact should not be forgotten. Although he had no special qualification in this respect for the task he undertook, yet he early displayed a remarkable aptitude for the solution of riddles: a peculiar talent which he shared in common with Dr. Hincks, who also acquired great distinction as a cuneiform scholar. In consequence of this peculiarity a friend induced him to turn his attention to Niebuhr's enigmatical inscriptions, which were then exciting very general curiosity;[3] and he now disclosed the result to the Academy. He communicated the substance of it to the 'Göttingen Literary Gazette' (Sept. 18, 1802); and in the following year Silvestre de Sacy, the well-known Arabic scholar, gave a full account of it in the

[1] Grotefend (G. F.), *Neue Beiträge*, Hanover, 1847, 4to.

[2] Heeren, *Werke*, xi. 344.

[3] *Ib.* pp. 345, 352.

'Magasin Encyclopédique' of Millin.[1] It was subsequently reported in the well-known Vienna periodical, the 'Fundgruben des Orients';[2] and in 1815 Grotefend had the opportunity of explaining the matter in his own words in an appendix to Heeren's 'Historical Researches.'[3]

The careful investigations of Münter were found of great service by his more successful follower. Münter had already pointed out that the inscriptions belonged without doubt to the period of the Achaemenian dynasty; that the words were separated from each other by a diagonal wedge, and that the writing ran from left to right. He had directed special attention to the word of seven letters, and to the fact that it preceded in many cases another identical to it but terminating with some unknown grammatical inflexion. He had suggested that the former probably signified some such title as 'king of kings' and that the royal name must be looked for in the word that precedes it, an opinion he only abandoned in view of the difficulties already explained.

[1] Year VIII (1803), v. 438. De Sacy's essay is accompanied by a plate giving the text, transliteration and translation of the B and G inscriptions of Niebuhr.

[2] Vols. iv. and v.

[3] *Historische Werke*, xi. 325. We have used the edition of 1824 as the more accessible. On comparing it with the earlier edition of 1815, we have not found any difference of importance. Both editions contain the same two plates. No. 1 is taken from De Sacy, as above, and edited by Tychsen. It gives Grotefend's alphabet exactly as it subsequently appeared, but without the later emendations of the *sr* and *k*, together with the long list of defective signs. At the bottom is a transliteration of the Xerxes inscription (G). No. 2 is by Grotefend. It gives the cuneiform text in the three species of writing of the inscriptions of Xerxes and Cyrus, and that on the Caylus Vase, with the translation. The three columns are divided so as to show the words of each species that correspond to one another. Kaulen says Grotefend's essay appeared in the second edition of 1805 (*Assyrien und Babylonien*, 1899, p. 126). Weisbach says its first appearance was in 1815 (*Achämenideninschriften Zweiter Art*, 1890, p. 3). We have not found the second edition in the British Museum.

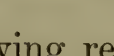
Such was the state of the inquiry when Grotefend entered upon it. The Memoirs on the Antiquities of Persia, published by M. de Sacy in 1793, afforded a sort of text-book to the decipherer. De Sacy had succeeded in reading some inscriptions at Naksh-i-Rustam, written in Pehlevi. Like those at Persepolis, they were engraved above the sculptured representations of kings, and they were found to contain the royal name and title. Grotefend inferred that the cuneiform inscriptions had very probably served as models for these later legends. The simplest of these and, from its brevity, the one that afforded the most striking resemblance to the B and G of Niebuhr ran: 'N N rex magnus rex regum [rex-um] Filius . . . [regis] stirps Achaemenis [?]'[1] The first step Grotefend made in advance of his predecessor was to perceive that it required two words to make up the phrase 'king of kings,' and that these two words no doubt corresponded to the two in the cuneiform: the one with seven letters and the longer form of the same word that followed it. This apparently obvious necessity had, as we have seen, wholly escaped Münter. When it was once recognised that the word of seven letters was clearly 'king,' it became obvious that, according to the analogy of the Pehlevi model, the first word of the inscription was the name of the sovereign, the third a qualifying title corresponding to 'magnus' and the two following, where he found the word of seven letters again repeated, and on this occasion followed by the longer form, evidently corresponded to 'rex' and 'rex-um' ('regum').

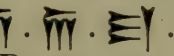
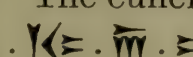
Comparing the two inscriptions (B and G), he found they began with different words, which he now inferred were the names of two different kings; but he observed

[1] De Sacy, *Mémoires sur diverses Antiquités*, Paris, 1793. It is given by Heeren (Eng. ed.), vol. ii. App. 2, p. 332.

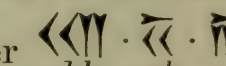
that the name in B, which was presumably in the nominative case, also occurred in the third line of G with a case-ending, followed by the word for 'king,' also with a case-ending. The termination differed from that already observed in the phrase 'king of kings,' and it marked, no doubt, the genitive singular, as the other denoted the genitive plural. Referring to his Pehlevi model, he inferred that the passage indicated the relationship of the two monarchs, and that the king of the second inscription (G) here declared himself to be the son of the king of the first inscription (B). This little bit of ingenuity solved the whole mystery. In the corresponding place in B he found another word in the genitive case, which was no doubt the name of the father of the king of that inscription; and he remarked that this name was not followed by the royal title. He had thus discovered the cuneiform signs that, with little doubt, expressed the names of three Achaemenian princes, and he had recognised that these personages stood to each other in the relation of father, son and grandson, and that the first was probably not of royal rank. That is to say, from 'G' he found that 'King Z' was son of 'King Y'; and from 'B' he found that 'King Y' was son of 'X' without the addition of 'King.' It only remained to determine who these three princes were most likely to be: and as the Achaemenian dynasty was a short one and their names already known from history, the task was not a difficult one. The two kings at the head of the inscriptions could not be Cyrus and Cambyses, because their names did not begin with the same cuneiform letter; they could not be Cyrus and Artaxerxes, because there is no such discrepancy in the length of the cuneiform words. There thus only remained Darius and Xerxes for the names occurring first in the two inscriptions; and this result was con-

firmed by the absence of the royal title from the name of the father of the king in one of the inscriptions, for he recollected that Hystaspes is not called king by the Greek writers. He assumed, therefore, that the first word in B was Darius (and it must have been satisfactory to notice that the second letter, *a*, was precisely the *a* of Münter) and the other Hystaspes; while the first word in G he assumed was Xerxes.

From these three known words he now set himself to get at least the approximate values for the letters they contained. According to De Sacy, Grotefend first transliterated Darius and then Xerxes, from which two names he obtained the word for 'king,' and finally he transliterated Hystaspes. But according to Grotefend's own account of the matter, he fastened in the first instance on the word that should read 'Hystaspes.' It consists of ten cuneiform signs, including the inflexion. He learned from Anquetil's Zend-Avesta that the Zend form of the name was Goshtasp, Gustasp, Kistasp. Placing a letter of the name under each cuneiform sign, he arrived at the following result:  *G o sh t a s p.*

Here, then, were seven letters of the cuneiform alphabet for which values were provisionally assigned and three left over for the genitive termination. The word for Darius also consisted of seven letters, which he at first read thus:  *D a r — — u sh.* The process so far was confirmed by the repetition of the same letters *a* and *sh* in both words in the position in which they were to be expected. There was more difficulty with Xerxes. The cuneiform word consisted of seven letters:  *— sh — e r*[1] *sh e* of which he already knew,

[1]  was assumed to be the same as the  *r* in 'Darius.'

or guessed, five, and these known values occurred in the order he expected; the first and third letters remained to be determined. It happens that Herodotus mentions that the name of Xerxes corresponded in sound to that of the Persian for 'warrior' or 'king'; and Grotefend noted that the first two letters in the words for 'Xerxes' and 'king' were the same in the inscriptions. He ascertained that the Greek letter ξ transliterates the Zend 'kshe'; but he could find nothing in the Zend vocabulary under 'kshe.' There were, however, several forms under 'kh,' 'sh,' which left no doubt that the first letter required should be read 'kh.' This assumption also enabled him to read the word for 'king' which had so long attracted attention. Of the seven letters that composed it he now knew four, which occurred in the order 
kh sh e — — o —

The Zend word for 'king,' 'khsheio,' corresponds almost exactly to the form thus reached,[1] and it enabled him to add *i* conjecturally to his alphabet (). No explanation of the third letter in 'Xerxes' had yet presented itself; but it nearly resembled the fourth and seventh in the word for 'king,' and the fourth in the signs for 'Darius'; and Grotefend presumed—erroneously, as it turned out—that they were the same. He observed that in Zend the aspirate is sometimes left out, and he thought the Zend *kh sh e i o* might very well be supposed occasionally to take an *h*. He accordingly conjectured that this was the value of the unknown letter, and he read *kh sh e* h *i o* h for 'king,' *kh sh* h *e r sh e* for 'Xerxes,' and *D a r h e u sh* for 'Darius.' It was not, therefore, till this point had been

[1] The true Zend spelling is 'khchayo'; the 'h' before 'y' expressed in cuneiform is understood in Zend. Burnouf (Eugène), *Mémoire sur deux Inscriptions* (1836), p. 76.

reached that he completed 'Darius' by the addition of *h*. He was led to decide for *e* as the value of the fifth letter,  , by the pronunciation of the name of Darius in Hebrew.[1] The form for Xerxes must have seemed at first sight rather disconcerting; but by the time the Appendix was republished, in 1824, Grotefend was able to announce that his conjecture was fully confirmed by Champollion, who spelt out the hieroglyphics for Xerxes on the Vase of Caylus to read *Kh sh h a r sh a*.

The result of his labours on the three proper names was that he arrived at the values of thirteen cuneiform signs: *G o sh t a s p* from Goshtasp or Hystaspes; *D r e u* from Darius, and *kh* and *h* from Xerxes. Of these thirteen letters, nine turned out ultimately to be correct; but the *a* had been previously recognised by Tychsen and by Münter: so that Grotefend now added eight correct values to the cuneiform alphabet, viz. *sh t s p—d r u—kh*.

He did not, however, rest satisfied with this achievement. He sought to transliterate and translate the remainder of the two inscriptions, but in this his fortune failed him. He does not explain in his own Memoir the method he pursued, but de Sacy has given us an insight into the process which no doubt rests on good authority.[2] We may suppose that he kept the Pehlevi inscription before him and continued to be guided by its analogy. He accordingly expected to find that the word after 'king' would express some honorary epithet corresponding to 'magnus' in the example before him. It was in fact composed of four letters of which he already knew the first and third, *e — r —*. The nearest word in Zend to suit his purpose was *e gh r e*, 'strong.' He therefore considered

[1] Millin, Year VIII, v. 461. [2] *Ib.* p. 462.

himself entitled to add a *gh* and another *e* to his list —both wrong.

So also in the position in the cuneiform where he should expect to find a word corresponding to the one translated 'stirps,' in the Pehlevi he observed a word of three letters of which he knew the first two, *p*, *u* —. He hit upon a word in Pehlevi—*bun*—that had precisely the signification of 'stirps.'[1] So he gave his *p* the alternate value of *b*, and added *n* to his list. These also were both wrong. His attention was next turned to the two different inflexions which had been remarked at the end of 'king.' In the one consisting of three signs, he already knew the two last,— *h a*, and, for some reason we have not found explained, he assumed the first () was a second sign for *a*. In this addition to his alphabet he was nearly right, for the letter has the value of *h* before *a*, *i*, *u*. In the second inflexion of four letters the first and third signs are the same, his *e* or *a*; and he learned from Anquetil that the Zend has a genitive ending *e tsch a o*. This was sufficient to add *tsch* and another *o* to his alphabet—both wrong. Here, then, are six more letters, *gh*, *e*, *n*, *a*, *tsch* and *o*, to be added to the thirteen already found, making nineteen in all. There are twenty-five letters in the two inscriptions given by De Sacy in 1803; and there is no doubt that before that time Grotefend had, with two exceptions, completed his alphabet, as it is found in the Appendix to Heeren in 1815.[2] According to it we see that he had already attempted to assign values to thirty-seven cuneiform signs, three of which are not to be found in Niebuhr's

[1] *Cf.* Grotefend's own account of how he heard of *bun*. Heeren (Eng. ed.), ii. 337.

[2] It seems to have been completed by the time he wrote the tract on the Zend alphabet, which is reviewed in Millin, Year VIII, vi. 96 (1803).

list and are due to defective copying. Two others occur in Niebuhr's list, but are also defective (*e*, 𐎡, and *r*, letter No. 8), so that there remain thirty-two genuine signs for which he has now found values. Several signs are, however, allotted to express the same sound. Thus he gives three signs for *e* (Nos. 3 [defective], 4 and 10) besides the sign for *e* or *a* which he generally transliterates *e*. He also gives three signs for *o* (Nos. 12, 16 and 23). It was afterwards found that these signs, which he took to be synonymous, are very far from being so: for example, not one of his three signs for *o* has that value, being respectively *i*, *ch*(*a*), and *m*(*a*). Indeed, among all the additions we are now considering he only succeeded in arriving at two correct values, 𐎠, *f* (No. 39) and 𐎢, *a* (No. 41), if indeed the second may be allowed to pass. Its true value is the aspirate *h*. But, as we shall afterwards see, it takes an inherent *a*, and it is very commonly used to express the sound 'Ha,' the vowel *a* being altogether omitted. In an inquiry of this kind it is necessary to admit approximate values as correct; and in the present case the value allotted to this sign by Grotefend ultimately led to the important identification of the word 'Achaemenian.' Here the first syllable, 'Ach,' is represented by the two signs for *h* and *kh*; and before it was known that the first letter had the sound of 'Ha' it was a comparatively slight error to drop the aspirate and set it down as *a*. We have therefore added this letter to the number of Grotefend's correct discoveries. He also observed that the word for 'king' is often represented by an ideogram (𐎢𐎠) which, like the word, is subject to inflexions. This discovery he, however, generously attributes to Tychsen;[1] but we have not found it in the 'Lucubratio.'

[1] Heeren (Eng. ed.), ii. 329.

De Sacy was not aware of the origin attributed to it, and he has given the credit entirely to Grotefend himself.[1]

Soon after the completion of the alphabet, but still before the appearance of the Appendix in 1815, he was induced to change the value of two of the signs.[2] One of these he now fixed correctly, *k* (25), and the other approximately *sr* (40).

It will be recollected that Sir William Ouseley visited Murgab in 1811 and made a copy of the inscription that is found repeated there several times. His book did not appear till 1821; but Grotefend had the advantage of seeing a copy of the inscription in time to include it in his Memoir. According to the alphabet as it then stood, the transliteration would render *z u sch u d sh*;[3] but if we follow his own account, he saw reasons, which he does not explain, to change the first letter from *z* to *k* and the third from *sch* to *sr*; with the result that he produced *k u sr u e sch*, which he read 'Kurus.' He does not mention the change of the *d* into *e*, but a more correct copy of the same inscription showed that that sign did not exist in the original, which consists of five signs only. After he had arrived at this result, he tells us, he came across the French translation of Morier's first Memoir, published in 1813, where, it will be recollected, that acute traveller suggested that Murgab was Pasargadae, the city of Cyrus.[4] This confirmation of his own studies was certainly satisfactory, though the sequence of events as he describes them is remarkable. Grotefend had now contributed eight correct values from the inscriptions B and G, two from the Murgab inscriptions, and two

[1] Millin (1803), v. 458.

[2] See Heeren (ed. 1815), vol. i. part 2, p. 704.

[3] Heeren (1824), xi. 372. See Eng. ed. ii. 350.

[4] *Ib.* p. 351.

from other sources—that is, twelve in all (if we admit the *sr*, really *r* before *u*, and the *a* which is *h* before *a*, *i*, *u*). In addition to these the *a* and *b* of Münter were known, though Grotefend erroneously changed the *b* into *v*; and hence in 1815 fourteen correct values had been reached.

Grotefend was now able to transliterate after his own fashion all the inscriptions in the first style of writing. It was quite a different matter to translate the mass of strange words that began to pour in upon him. He had to seek for analogous words in Zend or Pehlevi, or in other languages he considered akin; and he was assured by many candid friends that this was an undertaking for which he was incompetent. In the excitement of the first discovery he was much more reckless in this matter than he afterwards became, when he had more experience of the difficulties of the task. We find that he contributed the following translation of the B and G inscriptions to the 'Göttingen Literary Gazette,' August 1802. B: 'Darius, the valiant King, the King of Kings, the Son of Hystaspes, the Successor of the Ruler of the World, in the constellation of Moro.' This figures in De Sacy in 1803 as follows: 'Darius, rex fortis, rex regum, rex populorum, Hystaspis stirps, mundi rectoris in constellatione mascula Moro τοῦ Ized.' For G we have: 'Xerxes, the valiant King, the King of Kings, the Son of Darius the King, the successor of the ruler of the world.' [1]

His next attempt at translation appeared in the 'Göttingen Literary Gazette' of August 1803. In the interval he had made a study of Niebuhr's inscriptions A, H and I, and compared the A with Le Bruyn's inscription No. 131, which it nearly resembles.[2] The

[1] Heeren (Eng. ed.), i. 126; Millin (1803), v. 438, Plate.

[2] See *supra*, p. 73.

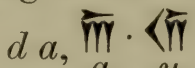
translation of the second paragraph of A he gives thus: 'Xerxes the Monarch, the valiant King, the King of Kings, the King of all pure nations, the King of the pure, the pious, the most potent assembly, the Son of Darius the King, the descendant of the Lord of the Universe, Jemsheed.'[1] The H of Darius ran to much the same effect and also culminated in Jamshid. Subsequently he attempted the inscription on the windows of the Palace of Darius that remained for so long a stumbling-block to his successors, and also the one on the royal robe in the Palace of Xerxes given by Le Bruyn (No 133). He likewise allowed the complete translation of the Le Bruyn No. 131 to appear in the Appendix to Heeren in 1815.[2] Many of these attempts excited well-deserved ridicule, and even in 1815 we find him much less eager to gratify public curiosity, and perhaps less confident in his own ability to do so adequately. He willingly furnished Heeren with the transliteration of the texts, but it was only by special request that he added some of his translations. 'If I have,' he says, 'as a decipherer established the value of the signs, it belongs to the Orientalist to complete the interpretation of the writing now for the first time made intelligible.'[3] He, however, still thought he could answer for the general sense of his rendering, though not for its verbal accuracy, and subject to that limitation the window inscription and the Le Bruyn plate No. 131 appeared in 1815. In the later edition of 1824 they are, however, suppressed.

We have now given an account of this once famous discovery and the results that were first attained. We have credited Grotefend with having found correct, or

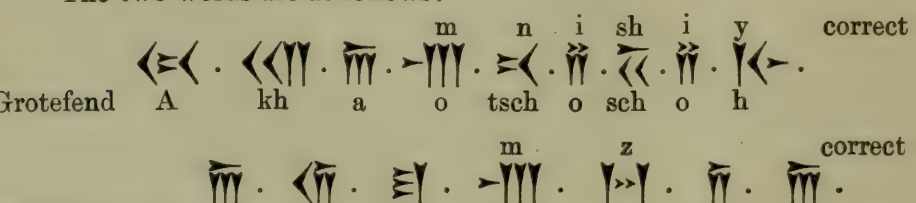
[1] Heeren, *ib.* p. 126. Millin, ii. 370, iii. 211.
[2] Heeren (ed. 1815), pp. 592, 595. *Cf.* Eng. ed. ii. 339.
[3] *Ib.* (1824), xi. 353. *Cf.* Eng. ed. ii. 337.

at least nearly correct, values for twelve characters; and the achievement may be allowed to merit the fame it still confers upon its ingenious author. Each step in the process now appears simple enough, and it is not easy for us to estimate the full magnitude of the difficulties he surmounted. They can indeed only be realised by remembering how completely a man like Münter had failed. Yet it is exceedingly curious to consider how so ingenious a person was baffled when he might seem to be on the point of farther success. Grotefend was harassed by the continued recurrence of the two words he transliterated 'Bun Akeotscheschoh.' There was, of course, no punctuation to guide the translator, and he constantly connected these two words together. His translation usually ran: 'Darii regis [filius] stirps mundi rectoris.'[1] He was quite satisfied from the beginning that 'bun' signified 'stirps,' and in the Pehlevi inscription, which was his constant model, he had before him the very appropriate reading 'stirps Achaemenis.' No phrase, he well knew, was more likely to appear in these inscriptions than this very one. He had already arrived at the first three letters of this word, *a*, *k*, *e* or *a*, and it is strange the suspicion never entered his mind that the rest of his transliteration should be modified in accordance with the apparently inevitable conclusion that the mysterious word was in fact 'Achaemenian.' This is all the more remarkable from another consideration. De Sacy had expressly exhorted him to keep a look out for 'Ormuzd,' which was certain to occur frequently in the cuneiform, as it did in the Sassanian inscriptions. In the Le Bruyn No. 131 he found a word which, according to his alphabet read 'euroghde'; and in this with singular acuteness he fancied he

[1] Millin, iii. 212 (1803).

detected some trace of Ormuzd.[1] But he identified the first portion of the word with the Zend of Anquetil 'éhoré,' and read for the whole 'Oromasdis cultor.'[2] Yet, according to his own transliteration the word gave him *a u r . . d a*,  He knew that a vowel may be omitted; and it is certainly strange that he never suspected that the two intervening letters might express 'muz,' and the whole give him 'Aurmuzda.' In deference to the Murgab inscription he had already changed his original *z* into a *k*, and his *sch* into *sr*; and we should think he might have seen sufficient ground in what has been said to justify his abandoning the *o gh*. His singular attachment to *o gh* prevented him from observing that the fourth letter in this word is the same as the letter that follows 'aka' in the other; and it is curious he did not see that an *m* in one case would help him on with 'Ormuzd,' just as an *m* in the other would lead up to 'Akam[enian].' There was an additional reason indeed for his changing his *o* into *m*, for he knew that (according to Anquetil) *m* was the sign of the accusative—a form from which he was forced to depart when he made *o* an accusative termination.[3] If he had advanced to 'akam,' we can scarcely suppose that he would have failed to recognise 'Achaemenian,' and would have modified his transliteration in accordance with this new

[1] The two words are as follows:



[2] Menant, *Les Langues perdues*, p. 111.

[3] Millin, xi. 99 (1803).

discovery. It was the identification of *m* and *n* long afterwards by Rask that to a great extent facilitated the way for farther progress towards completing the alphabet, an opportunity that Grotefend unfortunately allowed to escape him.

One of the chief services rendered by Grotefend to the alphabet was to draw up a long list of the various signs he found in the inscriptions which were evidently due to errors on the part of the copyist. These he ascertained by a careful collation of the inscriptions as they appeared in the works of Le Bruyn, Niebuhr, and others.[1] Even Niebuhr had admitted eight of these into his corrected list of forty-two letters, but they existed in great numbers in the inscriptions, and till cleared out of the way, they presented a serious obstacle to the decipherer. Some of his detractors, like St. Martin, have accused him of wilfully excluding these signs, or of changing them arbitrarily to suit the exigencies of his own system ; but the charge is entirely without foundation, as De Sacy recognised from the first.

Grotefend was of opinion that the cuneiform system was intended only for engraving, and that some other writing must have been in use for ordinary purposes.[2] He divided the various specimens that had come under his notice into three classes. The first included the Persepolitan inscriptions ; the second was to be seen upon the stone recently published by Millin, which he says partly resembles the third Persepolitan and partly the Babylonian bricks ;[3] and the third the Babylonian

[1] Millin, vi. 96. [2] Heeren (Eng. ed.), ii. 330.

[3] The Caillou Michaux. De Sacy also held that this inscription was different from the third Persepolitan, and that the Babylonian bricks and cylinders offered another variety (Millin, 1803, v. 440). De Sacy reported that the inscriptions on the bricks at Paris differed entirely from the inscriptions published by Hager (Hager, p. 58, *note*.)

inscriptions, the most important being that published by the East India Company. 'These are the most complicated,' and are to be 'distinguished by the number of the strokes of union and by the eight-rayed star.' The first class—namely, the Persepolitan—he again subdivided into three kinds, according to the relative complexity of the writing. He considers they represent different languages: the first or simplest is the 'Zend, which is apparently the Median language'; the second the Parsi, or language of the true Persians; the third 'perhaps a Persian dialect, perhaps Pehlevi; but in consequence of the absence of prefixes it cannot belong to the Aramean family,' a reason also that excluded the two others from the same classification. He thought the first system of writing was the Old Assyrian; the second differs from it by having a greater number of oblique and fewer angular wedges; while it differs from the third system by avoiding, like the first, wedges placed diagonally, and by having more wedges that cross each other.[1] He held that all the three systems of Persepolitan are alphabetical and not merely syllabic or ideographic; in the first system he finds words composed of eleven characters, in the second of nine, and in the other of seven. On account of the number of signs required in the second system to compose a word, he concludes that it employs separate letters for long and short vowels; and also to express the combination of a consonant and vowel. He thought the number of letters in its alphabet was about forty, and he observed that the monogram for 'king' is always used; neither here nor in the third system is the royal title ever written alphabetically. In the Plate (No. 2, 1815) he gives three short inscriptions: the Xerxes (G, Niebuhr), the Cyrus

[1] Heeren (Eng. ed.), ii. 324–5; Millin, ii. 372; cf. *Werke*, xi. 334, 339, 355. Heeren also thought the first species was the oldest.

(Murgab) and the Xerxes on the Vase of Caylus, arranged word for word to show the signs in the three systems that correspond to each other; and he found that the second system corresponds word for word to the first, but that the third differs considerably. In the third system he remarked also that a word could be formed with so few signs that he thought it avoided the use of vowel signs as far as possible, and employed a single character to express the threefold combination of consonant, vowel and consonant; and to that extent he concedes that it may be called syllabic.[1]

It is a very singular circumstance that Grotefend seems to have spent the whole of his ingenuity upon his first efforts; from that time he was unable to make any farther contribution of importance, and the work of decipherment was carried on entirely by other scholars. Yet he never withdrew his attention from the subject, and when he died, in 1853, all the difficulties of the Persian column had been overcome with but little farther assistance from him, and sufficient was already known of the Babylonian to disclose a wonderland of new and unexpected knowledge. Grotefend made a careful study of all the available inscriptions as they came to light, and from first to last his interest in them never flagged.

We have already seen how carefully he analysed the three Persepolitan columns, seeking out in each the signs that might be supposed to correspond to each other. The classification of the Babylonian inscriptions as they now began rapidly to accumulate afforded him fresh material for the exercise of his ingenuity. It seems to have been some time before he would admit the practical identity of the writing of the third Persepolitan column with that of the simplest of the Babylonian styles. According to his earliest classification the three

[1] Heeren, *Werke*, xi. 342.

Persepolitan systems were kept entirely apart from the two that had been remarked at Babylon. But it was not long before the similarity of the most complicated of the Persepolitan with the simplest of the Babylonian became apparent. This was fully recognised by Rich, in 1811, and we cannot suppose that Grotefend was far behind.[1] Rich was the first to announce that Grotefend had come to the important conclusion that the two or three different forms which had been observed at Babylon were mere varieties of one and the same method of writing, analogous to our Roman and Gothic character. Grotefend's attention was now chiefly directed to the Babylonian inscriptions, mainly in consequence of the articles contributed by Rich to the 'Fundgruben des Orients,' and afterwards by the constant correspondence he maintained with Bellino, the German secretary Rich had brought out with him to Bagdad.[2] Grotefend now abandoned the idea that the third column was written in Pehlevi. He described the language as Median Persian, and he called it the 'Babylonian column.' He showed also that the many differences in the writing of the simple Babylonian were due no doubt to the idiosyncrasies of the engravers; but they added greatly to the difficulty of the decipherment.[3] He noted also the frequent occurrence of different ideograms for the same word, such, for example, as for 'son.' He sharply contrasted it with such writing as is found in the India House Inscription which he called 'the complex' (*zusammengesetzt*). Mr. Rich had lately obtained several specimens of cylinders; two of these were found on the

[1] Grotefend's views on this point were explained in the *Fundgruben des Orients*, vol. v. pt. 3. See Grotefend, *Neue Beiträge* (1840), p. 7.

[2] Dorow, *op. cit.* p. 26. *Cf.* Grotefend, *Neue Beiträge* (1840), p. 23.

[3] Dorow, pp. 32, 38, 41. He recurs to this subject in *Neue Beiträge* (1840), pp. 6 and 7, and refers for his original treatment of it to *Fundgruben des Orients*, vol. iv. pt. 4, and vol. vi. pt. 2.

site of Nineveh and a few others at Borsippa. The account he gave of them in the 'Fundgruben' speedily attracted attention, and the facsimile of one in red jasper from Nineveh was published by Dorow in 1820. Grotefend called attention to the well-marked differences in the cuneiform writing that characterise these specimens, and which remove the third Persepolitan still farther from them than even from the most complicated Babylonian.[1] These opinions he expressed in his letter to Dorow, and in a tract on the 'Elucidation of certain Babylonian Cylinders' included in the same publication (1820).[2]

After his promotion, in the following year, to the rectorship of the Lyceum at Hanover (1821) other studies began to engage his time. He wrote a History of his Academy (1833); he edited the fragments of Sanchoniathon (1836); and he dabbled somewhat deeply in such matters as the Oscan and Umbrian languages (1835–1838). He had not, however, entirely forgotten his old subject, and in 1832 he attempted a translation of the I inscription, which he sent to the 'Göttingen Gazette.' He recognised that it contained a list of geographical names, which, however, he was unable to render correctly; but he had the merit of attracting the attention of other scholars to their existence, and it was from them that Lassen was afterwards enabled to make such remarkable progress.[3] In 1837 he began to contribute a succession of papers to the Scientific Society of Göttingen on his old subject, many of which were afterwards republished in separate form. He was now sixty-two years of age, and his

[1] Dorow, p. 42.

[2] *Erläuterung über einige Babylonische Cylinder* (1820), by Grotefend; and *Nachträgliche Bemerkungen* which follow it.

[3] Cf. *J. R. A. S.* 1848 (Annual Report, 1846) p. vii. Holtzmann, *Beiträge zur Erklärung der Persischen Keilinschriften* (Carlsruhe, 1845), p. 13.

mind was, no doubt, less able to grapple with the series of discoveries that were just on the point of being made. In the previous year (1836) Burnouf and Lassen had simultaneously published their Memoirs on the cuneiform decipherment that soon carried the subject far beyond the point at which Grotefend had left it some thirty years before. Grotefend accepts the general results, but without much evidence of enthusiasm.[1] The reading of 'Auromazda' is now satisfactorily established; but he clings to his *ogh* with unabated affection.[2] On the other hand, he suggests the surrender of the *sr* in 'Kurus,' and reads *r* or *rh*. As regards 'Achaemenian,' the utmost he will concede is that the Greeks probably derived it from 'Akhâosôschôh,'[3] and to do this he reluctantly softens his *tsch* to a soft *c* to give the *s*; but he will on no account admit the true reading, *n*.[4] He still contends that the languages of the three Persepolitan columns are related to each other, but he sees that the first, though resembling Zend, is not identical with it. He entirely rejects the idea already broached that the third is Semitic, and he adheres to his conviction that none of the three can be called syllabic or ideographic in the strict sense of those terms.[5]

Notwithstanding the tenacity with which he adhered to some of his old errors, his later contributions were not entirely without result. He devoted great attention to the comparison of the language of the first with those of the other two columns, and in this task he exhibited a considerable amount of penetration.[6] For example the word 'adam,' which is constantly recurring in the Old Persian, continued to be translated, even

[1] *Neue Beiträge* (1837), p. 17.
[2] *Ib.* p. 25.
[3] *Ib.* p. 35.
[4] *Ib.* p. 28.
[5] *Ib.* p. 39.
[6] Holtzmann, *Beiträge*, p. 16.

by Lassen in 1836, as 'posui.'[1] It was Grotefend who first observed that it was rendered in the other two columns by words that were certainly elsewhere used for the pronoun, 'mân, manâ,' and the suggestion led to the recognition of 'adam' as the first person singular, 'ego.'[2] The writings of Burnouf and Lassen revived an interest in cuneiform studies, and Grotefend was enabled for the first time to publish inscriptions which he had received twenty or even thirty years before from Bellino, and which had lain till now unseen in his desk. He was still regarded as the chief authority upon the subject, and newly discovered inscriptions were invariably forwarded to him. Among these he received one that had recently found its way to the British Museum, and in which he was able to read the name of Artaxerxes, a king not previously met with in the inscriptions (1837). But his chief triumph in this respect was the publication, in 1848, of an inscription of Sennacherib. The original cylinder was said to have come from Kouyunjik,[3] but Bellino had long ago made a copy of the inscription and the cylinder is now called after him. When the inscription was at length translated by Mr. Fox Talbot in 1856, it was found to relate the first two years of the Annals of the King. Grotefend caused an admirable engraving of it to be made on copper, and this, said the translator, not without a tinge of irony, 'was, I think, the greatest service that painstaking savant rendered to the science of archæology.'[4]

Grotefend continued to write upon these subjects down to his death in 1853. He endeavoured to keep abreast of the new discoveries in Assyria. He was

[1] In the same year Burnouf suggested 'this is,' or 'I am' (*Mémoire sur deux Inscriptions*, p. 170).

[2] Holtzmann, *Beiträge*, p. 24.

[3] Smith's *Biblical Dictionary*, art. 'Nineveh,' p. 560.

[4] *J. R. A. S.* (1861), xviii. 77.

familiar with the writings of Botta and Layard. He studied the disquisitions of Westergaard, Hincks, and Rawlinson. He contributed articles on the builder of the Khorsabad Palace; on the age of the Nimrud Obelisk; on the foundation and destruction of the buildings of Nimrud; and on inscriptions found at Babylon and Nimrud. When M. Mohl, the well-known secretary to the French Asiatic Society, visited him shortly before his death, he found his table littered with inscriptions, chiefly those received from Bellino in the early years of the century.[1] He professed to have given up his Persepolitan studies in favour of the new Assyrian inscriptions; and he saw no reason why he should not succeed in unravelling their mystery. It is somewhat pathetic to observe the old man of seventy-eight, still animated by the recollection of a success he had achieved fifty years before, but had never been able to repeat, vainly hoping that at the last moment he might be rewarded by another fortunate guess that would redeem the long failure of so many years. The new discoveries were coming upon him with extraordinary rapidity and magnitude, and he could not but feel crushed and helpless beneath such an accumulation of fresh materials. The solution of the difficulties they involved had passed into younger and abler hands than his, and he had to comfort himself as best he might with the recognition so freely accorded to him, that he had laid the foundation upon which others were now building; and with the assurance that the recollection of his services would not wholly pass away from the remembrance of men.[2]

[1] Mohl (Jules), *Vingt-sept ans d'Histoire des Etudes Orientales*, i. 546; Report, June 1854.

[2] See Grotefend's Alphabet, App. A. *Cf.* Burnouf, *Mémoire*, Pl. 1. See his correct values, App. B.

Grotefend's method of decipherment, when it first appeared, met with a varying degree of success in different quarters. In Germany, as we have seen, it was at once adopted by Tychsen, who became one of its chief exponents; and it also secured the favour of Heeren, who allowed it to share in the wide popularity accorded to his own writings. But even in Germany it was some time before it gained general recognition. The theory of Lichtenstein, absurd as it may now appear, continued to command attention, and even in 1820 Grotefend still thought it necessary to defend his own opinions against those of his rival.[1] His views, however, gradually gained the ascendant, and in 1824 he felt he could now allow the controversy to drop; and in the new edition of Heeren he left out a large portion of the criticism he published in 1815. Since then his merits have been fully acknowledged by his own countrymen, who are rarely disposed to underrate any of the achievements of their kindred. In England his system never had to contend with the rivalry of Lichtenstein. It was received at once with general approval by all who were best qualified to form a judgment. The learned Ouseley, the more brilliant Morier, Sir R. K. Porter and Mr. Rich never doubted for a moment that Grotefend had deciphered the names of Hystaspes, Darius and Xerxes. Very different was its reception in France. De Sacy, who was really the first to introduce it to the notice of Europe, could never feel any real conviction that it rested upon solid grounds. He was quite uninfluenced by the jealousies that blind the judgment of smaller men, and he would gladly have given it his approval if he could have brought himself to accept the evidence. But this he was entirely unable to do; and it was certainly not because he failed

[1] Dorow, p. 28.

to apprehend the process by which it was reached. The explanation he has given of it greatly excels in lucidity and in logical precision the account of Grotefend himself—so much so, indeed, that we are inclined to think that Grotefend never thoroughly understood his own system till it was explained to him by De Sacy. The French scholar was fully acquainted with the subject, for he had himself made frequent attempts at decipherment, always, he frankly acknowledges, with a 'total absence of success.' The only point he considers tolerably certain is that the word with seven signs is the title of King.[1] He doubts altogether that the names of the kings had been correctly ascertained, and he points out the difficulty of accepting an alphabet that contains three or four signs for *e*, three for *o*, and so on The opinion he formed in 1803 he repeats in 1820. In his letter to M. Dorow, he confesses that he is still unable to find the names of the Persian kings or of the god Ormuzd in the cuneiform inscriptions; and he declares he does not believe that anything hitherto published on the subject is worthy of confidence.[2]

While the cuneiform inscriptions were thus engaging the attention of European scholars, English travellers had begun the investigation of the sites of Babylon and Nineveh that were so soon to yield such surprising results. In 1808, Kinneir visited Hillah, accompanied by Captain Frederick, of the Royal Navy; and two years later they extended their explorations to the mounds near Mosul. Kinneir's 'Geographical Memoir,' published in 1813, contains an excellent account of both these historic ruins. Soon after his visit, Mr. Rich went to Hillah and began his investigations (1811). He found the surface of the ground covered with

[1] Millin, v. 451, 465. [2] Dorow, p. 58.

'broken pans and bricks, some of which have writing on them.'[1] He was able to make a small collection of antiquities, including a curious basaltic stone covered with cuneiform characters, and these specimens eventually found their way to the British Museum.[2] The Memoir he published on the subject made its first appearance in the 'Fundgruben des Orients,' but was, republished in England by Sir James Mackintosh. A second Memoir, written in 1817 and printed soon afterwards, was enriched by three plates containing several cuneiform inscriptions that now appeared for the first time.[3] Rich considered there were three different kinds of writing to be found at Babylon, which he divided 'according to the order of their complication.'[4] The first, he observed, corresponds to the third Persepolitan; and in Plate 8 he gives three specimens of it, all found upon stones resembling the 'Caillou Michaux' described by Millin. The second occurs rarely, and Mr. Rich says he was the first to publish an example, although Grotefend had already seen a copy of a similar kind. It is on a piece of baked clay in shape like a barrel, about $4\frac{3}{4}$ in. long and $1\frac{1}{2}$ in. in diameter (Plate 9, No. 4). The third species is that generally found on bricks and cylinders, of which he gives four examples.[5] While he wrote, he learned that the three different kinds of Babylonian writing had been submitted to Grotefend, and that 'learned and ingenious person' had come to the conclusion that they 'are only varieties of different modes of writing the same character, and that there is

[1] 'Journey to Babylon in 1811,' by J. C. Rich, p. 6; published in *Babylon and Persepolis*, 1839.

[2] Vaux, *Nineveh and Persepolis* (1851), p. 187.

[3] It was translated into French by M. Raymond, the Consul at Bussora, 1818. *Journal Asiatique*, i. 58.

[4] Rich, p. 185.

[5] *Ib.* p. 188.

in fact but one real kind of Babylonian writing.'[1] Although Rich found a vast number of bricks at Babylon, he observed that the inscriptions were nearly all alike: in fact only four different legends had up to that time been noticed on the Babylonian bricks. The most common consists of seven lines. The others are in six, four and three lines; of these Grotefend had seen copies of the inscriptions in seven and three lines. The other two are comparatively rare. The inscribed bricks are generally about 13 in. square by 3 in. thick, and are of different colours, red, white and black.[2] They were usually found with the inscriptions downwards, and when they occur in a different position there is a strong presumption that they have been moved from their original place. The cylinders found by Mr. Rich varied from 1 to 3 in. in length and were of different materials—some of stone, others of paste or composition.[3] They are perforated to admit of the passage of a cord, and were carried about to be used for seals. Rich was among the earliest to recognise that this was their purpose; and he thus accounted for the writing being from right to left, contrary to the invariable custom. He also made the useful suggestion that, as the language of the first Persepolitan was no doubt that of the court of Darius, the languages of the other two columns were in all probability those of Susa and

[1] Rich, p. 186, *note*. This statement is, however, too sweeping, for Grotefend always clearly distinguished two distinct kinds of Babylonian, corresponding to the cursive and the hieratic. Rich's first and third are examples respectively of these two styles. The former, or cursive, occurs in lapidary inscriptions such as Rich has described; the second, or hieratic, on bricks and cylinders, and in the long inscription of Sir Harford Jones (the India House Inscription). Rich's second species is not a distinct variety. Its peculiarity consists only in the 'distortion of oblique elongation,' due perhaps to the eccentricity of the engraver. (See Rawlinson in *J. R. A. S.* x. 24.)

[2] Rich, p. 99.

[3] *Ib.* p. 190.

Babylon.[1] Rich exercised considerable influence in Germany by his contributions to periodical literature, and his cordial assent to the opinions of Grotefend was of importance at that time. We have seen that his first Memoir was published in Vienna before it appeared in London; and he continued tow rite to the 'Fundgruben des Orients' to describe the inscriptions he had procured from Babylon and Nineveh. The cylinder from Nineveh is said to have been the earliest specimen brought to light, and it was the first to attract the attention of Grotefend to the Babylonian system of writing.[2] It was published by Dorow in 1820, when inscriptions of that kind were almost unknown. Rich's secretary, Bellino, was also in constant correspondence with Grotefend down to the period of his early death.[3] He sent him a copy of the first column of one of the inscriptions at Hamadan, which Grotefend presented to the University Library of Tübingen, where Bellino had been educated.[4] He also sent him copies of inscriptions on forty bricks in Mr. Rich's collection, many of them of service by illustrating slight differences in the writing of words and characters.[5]

We have said that De Sacy remained unconvinced that the names of Darius and Xerxes were to be found in the Persepolitan inscriptions. Two years after he had solemnly repeated this confession, a M. St. Martin announced that he had made the same discovery as Grotefend, which he professed to have reached by an entirely different and far more scientific method: a circumstance which, if true, would have afforded a strong confirmation of the reality of the original discovery. St. Martin was born in 1791, and died of

[1] Rich, p. 183. [2] Dorow, p. 26.
[3] *Ib.* p. 26. *Neue Beiträge* (1840), p. 16.
[4] *Neue Beiträge* (1837), p. 6, Plate 1. [5] *Ib.* (1840), p. 23.

cholera in 1832, at the early age of forty-one. He rose from a comparatively humble sphere of life, and the aristocratic prefix to his name seems to have been merely assumed. He was for a time a traveller to his father, who was a tailor, but his talent for languages soon transferred him from the mercantile to the learned world, and, combined with his strong Monarchical opinions, enabled him to secure a fair amount of success. He was especially devoted to Oriental studies, and he learned Arabic, Persian, Turkish and Armenian; but his attainments seem to have struck his contemporaries as more pretentious than profound. He was appointed, when only nineteen, to be secretary to the Society of Antiquaries (1810), and at thirty-one he became Curator of the Library of the Arsenal (1824) and afterwards an Inspector of the Royal Printing House, a position that enabled him to introduce the Zend and cuneiform type. He was a very precocious scholar, for one of the writings on which his fame rests was published at the age of twenty—'Egypt under the Pharaohs' (1811). Seven years later his most important work appeared: 'An Historical and Geographical Memoir on Armenia' (1818). He is remembered also as one of the founders of 'L'Universel' (1829), a strong organ of the Legitimist party.

His paper on the cuneiform inscriptions was read before the Académie des Inscriptions, of which he was a member, in 1822, and it was afterwards published in the 'Journal Asiatique' (February 1823). A more detailed account of his discoveries was promised, but it never seems to have appeared; and the only other authoritative expression of his opinion occurs in Klaproth's 'Aperçu de l'Origine des diverses Ecritures' (1832), where we are favoured with the latest development of his cuneiform alphabet. His treatment of this

subject is not calculated to raise his reputation as a scholar; and it certainly exposes him to the charge of want of candour.

He is good enough to begin the account of his original discoveries by a reference to the previous labours of Grotefend, of which he had a very poor opinion. He has seen the analysis of Grotefend's system given by Tychsen in the 'Göttingen Gazette' of September 1802, and the Essay of De Sacy, written in the following year. These publications, he says, produced little impression at the time, and they were farther discredited by Grotefend's own contribution to Heeren, in 1805.[1] None of the papers since contributed by Grotefend to periodical literature have shown any improvement upon his earliest writings, and St. Martin lays it down that the contents of the inscriptions are rightly regarded as still wholly unknown. But in addition to this unfavourable opinion, which was shared also by De Sacy, he brings charges of his own against Grotefend's system that are wholly without foundation. He accuses him of frequently varying the values he assigned to the characters, whereas it was in consequence of the extreme tenacity with which he clung to the values he originally assigned that his progress was in great measure arrested. St. Martin says Grotefend attributed five or six entirely different values to the same character, and that he considered that each character is susceptible of assuming a variety of different forms, both statements being equally without foundation.[2] He affects to regard the corrections introduced into the texts by Grotefend—which is one of his most valuable services—as purely arbitrary,

[1] Klaproth (H. J.), *Aperçu de l'Origine des diverses Ecritures* (Paris, 1832), p. 63.

[2] *Ib.* p. 63. Cf. *Journal Asiatique* (1823), p. 69.

and he professes to believe that interpretations based upon these emendations can inspire no confidence, and can only be regarded as an exercise of the imagination. He was surprised to find that his own interpretations, which he reached by 'proceeding in an entirely different way,' should have conducted, so far as they went, to precisely the same result: and he will not dispute that Grotefend is entitled to the priority of merit in detecting the royal names.[1] It does not appear that St. Martin got any farther himself, and we may be permitted to doubt whether he would have accomplished even this but for the labours of the predecessor he is so careful to disparage. When we come to inquire into 'the entirely different way' followed by St. Martin we find that in fact it is precisely the same as that with which we are already familiar. He worked on the same two inscriptions, the B and G of Niebuhr; he treats us over again to the analogy of the Sassanian inscriptions: the well-known phrase 'king of kings'; the genitive suffix; the position of the royal names; the evident relationship of father and son, and so on. Our original investigator continues to carry us over all the old ground. He is struck by the similarity of the wedges in the word for 'king' and in one of the royal names; he is guided by the Zend *khsheio* to the cuneiform words for 'king' and 'Xerxes,' and he tells us how dexterously he proceeded from this to the decipherment of the names of Darius and Hystaspes. In one name only he differed from his predecessor. It will be remembered that Grotefend deciphered 'Cyrus' in the Murgab inscription. St. Martin preferred to transliterate 'Houschousch' and to read 'Ochus';[2] but in this single attempt at originality he turned out to be wrong and Grotefend right. He has spared us all the

[1] *Journal Asiatique* (1823), pp. 68–70.

[2] *Ib.* p. 85, *note.*

reasons that led him to these important results, as well as many grammatical and literary considerations which he promised to publish in a more extended Memoir. One success he may indeed claim. In reading the name of Hystaspes he compared it to a Zend form 'Vyschtaspo,' which gave a more correct result than the 'Goshtasp' of Grotefend.[1] This happy accident enabled him to assign the correct value of *v* instead of *g* to one cuneiform sign; and in the second letter of the same word he substituted *y* for Grotefend's *o*, and thereby approached nearer the correct value, which is *i*. These are the sole contributions he made to the work of decipherment.

It must not, however, be supposed that his treatment of the alphabet was wanting in originality. It will be recollected that Grotefend was in possession of thirteen correct values; but of these St. Martin rejected five.[2] The eight that remained added to the two he determined himself (*v* and *y* or *i*) gave him an alphabet of ten correct values, as opposed to the thirteen in the possession of Grotefend. He altered the values Grotefend had incorrectly assigned to nine other characters, without making any improvement upon them.[3]

[1] *Journal Asiatique* (1823), p. 82.

[2] St. Martin agreed with Grotefend in the signs for *s*, *r*, *d*, *b* or *p*, *a*, *t*, *kh*, and *sch* () which, in accordance with French orthography, he read *ch*. He rejected *k*, *f*, *sr*, *a* (No. 41), all of which are correct.

[3] The following is the list of *incorrect* values assigned by Grotefend, showing the changes made by St. Martin:

Grotefend	St. Martin	Correct
v	*r*	*b*
e	*i*	*v*(*a*)
o	*e*	*ch*
gh	*e*	*z*(*u*)
o	*a*	*m*
i	*h*	*th*
h	*e*	*y*
h	*e*	*m*
tsch	*b* and *m*	*n*

He confessed with admirable modesty that there were twelve characters of which he could make nothing; and this struck Lassen as being the most satisfactory portion of his work.[1] Among them Grotefend had already condemned four as defective; one he had determined correctly as *f*, and he had nearly approximated to two others, *th* for *t* before *u* (22) and *dj* for *j* before *i* (32). St. Martin's alphabet in its complete form consists of twenty-five letters, represented by twenty-seven cuneiform signs.[2] But of these letters he has three different modifications of the sound of *e*, which alone monopolise six cuneiform signs. Three signs are allotted to *h*, two to *a*, two to *ou*, two to *ch*, and two to *r*. In its latest form ten of the letters of our alphabet are left without equivalents in cuneiform—*b*, *f*, *g*, *i*, *l*, *q*, *u*, *w*, *x*, *z*. He was not, however, always without a *b*.[3] It was probably not till after 1826 that he saw reason to substitute an *m*. Rask had recently suggested that the word which Grotefend transliterated 'Akeotchoschoh' should be 'Aqamnosoh,' and signified 'Achaemenian.' St. Martin had no suspicion of this when he first wrote his paper, and he translated the phrase 'race illustrious and very excellent.'[4] But when Klaproth appeared, in 1832, the transliteration and translation were made to run as follows: 'Poun Oukhaamychye,' 'race d'Achémènes,' which differs from the first only by the substitution of an *m* where *b* occurred before.[5] This is a farther instance of unacknowledged borrowing. St. Martin accommodates himself to the view taken by Rask; but,

[1] 'Lob verdient, dass er sich bescheidet, einige Zeichen als unentziffert hinzustellen.' Lassen, *Altpersische Keilinschriften* (Bonn, 1836), p. 18.

[2] Klaproth, *Aperçu*, p. 63.

[3] The *b* ( ) is given in the *Journal Asiatique*.

[4] See Heeren, *Werke*, xi. 363; *Journal Asiatique* (1823), p. 83.

[5] Klaproth gives St. Martin's Darius Inscription.

as ill luck would have it, he changed the wrong letter: the sign he altered into *m* is in fact the *n* in the word 'Achaemenian.'[1] With this our notice of St. Martin's Memoir may fitly close. It is indeed a singular production for a scholar of repute. He begins by assuring his readers that the contents of the Persepolitan inscriptions were still entirely unknown; he censures the method adopted by Grotefend that had yielded him the names of three of the Achaemenian kings; for himself, he leads us to suppose that he is about to announce an entirely different and more scientific method. He then proceeds, without a word of warning and in simple confidence in our ignorance, to follow precisely the method he has just denounced, and he affects astonishment that it should lead him to precisely the same result. He can make no progress beyond the three names already known. In the case of the Murgab inscription he ventures to take a step upon his own account and immediately blunders into error. His alphabet is remarkable for its inferiority to the one he desires to supersede. It has at most ten correct values to Grotefend's thirteen or fourteen.[2] Eight cuneiform letters are abandoned altogether in simulated despair. Nine are changed without being improved, and ten of the most important sounds in human language are left without expression. We do not condemn him for being inferior to his master: many pupils suffer from that disability; but we censure him for denying his obligation and for affecting an originality he did not possess. One service indeed he rendered. If he made no new discoveries in cuneiform, he at least has the merit of discovering Grotefend's discovery to France.

[1] Rask (E.), *Ueber das Alter der Zend-Sprache* (Berlin, 1826), p. 28; Klaproth, p. 67.

[2] See above, p. 179.

Many of his countrymen were willing to take upon his authority what they would not accept from the German writer, and it gradually came to be believed (though even yet by no means universally) that the names of Hystaspes, Darius and Xerxes were to be read in the Persepolitan inscriptions.[1]

The first advance in cuneiform decipherment after Grotefend was made by Rask, a distinguished Danish scholar. He was born in 1782, and at first he devoted himself entirely to Icelandic. He spent two years in the island, and on his return, in 1817, he published an edition of the Edda. Subsequently he added Oriental languages to the range of his acquirements. For a time his serious attention was devoted to Sanscrit, Persian and Arabic, while his leisure moments were diverted by the acquisition of Russian and Finnish. He then went to India for three months, to perfect himself in such trifling matters as Sanscrit, Hindustani, Zend and Pehlevi. A short visit to Ceylon was devoted to Cingalese, Pali and Elu. On his return to Copenhagen he filled two professorial chairs—those of Oriental Languages and Icelandic. He is regarded as one of the earliest founders of Comparative Philology, and the number of his writings is very large. Among them are Grammars of Anglo-Saxon, Icelandic, Cingalese, Acra, Lapp, Danish and Italian. But it is to the little volume 'Ueber das Alter der Zend-Sprache' that we have now to refer.[2] Some writers contended that Zend is merely a dialect of Sanscrit, restricted in its use to sacred literature, and never employed as a spoken language.

[1] For St. Martin's alphabet see *Journal Asiatique* (1823), p. 67, Plate; Burnouf, *Mémoire*, Pl. 1; and Klaproth, *Aperçu*, p. 63. St. Martin was engaged upon the second and third columns at the time of his death. His Memoir remained incomplete, and, so far as we know, it has never been published in a separate form. *Journal Asiatique* (3e série), v. 359.

[2] Translated from the Danish by Hagen, Berlin, 1826.

It was also asserted that the Zend-Avesta was of comparatively recent date, possibly not earlier than the third century A.D.[1] One of the many arguments adduced by Rask to confute these theories was the similarity between the Zend and the language of the first Persepolitan column. He pointed out that, so far as it had been deciphered by Grotefend, it bore a strong resemblance to that of 'Father Zoroaster'; and he argued that where they differed to a marked degree in their case-endings, the probability was that the divergence is due to an error in the values assigned to the letters by Grotefend. Thus, the genitive plural as given by Grotefend ends in *e* or *a*, *ch* (*tsch*), *a*, *o*, which bears no resemblance to anything to be found in Zend; and he casually threw out the suggestion that it should read *a-n-a-m*, which is a usual Zend form.[1] He farther showed, in support of this view, that the change of an *o* into *m* would go a long way to solve the difficulty of the word that follows 'stirps'; and he hazarded the improved transliteration 'aqamnosoh,' from which 'Achaemenian' might be derived. The change of *tsch* into *n*, and *o* into *m*, which was at once accepted and ultimately proved to be correct, was of great importance; and both Burnouf and Lassen admit the extent of their obligations. Rask's own studies lay in an entirely different direction, and he made no attempt to follow up his success in decipherment; but he took occasion to point out that there must be some radical error in an alphabet that assigns two different sounds—*e* and *a*—to the same sign, and two signs to the same sound, *a*; and

[1] In 1832 Schlegel asserted that the Zend and the Zend-Avesta were forgeries by the Guebres (or Parsees) of Guzerat (Heeren, Eng. ed., ii. 341). Rawlinson, in 1847, was still of opinion that Zend dates after Alexander, possibly some centuries (*J. R. A. S.* x. 50). He was also convinced of the late origin of the Zend-Avesta.

[2] Rask, p. 28.

he lays down the rule 'that one letter should have only a single sound, and two or more letters can never denote one and the same sound.' The last maxim was not, however, verified, for it is found that some letters are represented by two and even three signs, according to the vowel they precede. He added the useful warning that the language of the inscription is probably Old Persian, and not, therefore, identical with the language of Zoroaster. Hence, while they are similar, and may be usefully compared, it by no means follows that the grammatical forms and the vocabulary are always identical.[1]

We now come to the two great scholars, Burnouf and Lassen, to whom, after Grotefend, the decipherment of the cuneiform is chiefly to be ascribed.

Eugène Burnouf was the son of a distinguished father, who was a Professor at the Collège de France. Eugène was born in 1801, and died in 1852. At the age of twenty-five he acquired a great reputation for Oriental scholarship by the publication of his essay 'Sur le Pali,' which he wrote in collaboration with Lassen.[2] But his fame rests principally upon his Zend studies, the first of which, the Vendidad, appeared in 1830. More than a hundred years had elapsed since the first copy of the original text was brought to Europe by George Bouchier, an Englishman (1718), who had obtained it from the Parsees at Surat. Bouchier presented it to the University of Oxford, where it might be seen long afterwards chained to a wall in the Bodleian. No one, however, could read a word of it. At length a young Frenchman, Anquetil de Perron, determined if possible to overcome the difficulty. He

[1] Rask, p. 30. St. Martin had already intimated a doubt as to their absolute identity (*Journal Asiatique*, 1823, p. 77).

[2] Published in *Journal Asiatique*, 1826.

went to Surat in 1758, and put himself under the tutorship of the learned Parsees. He was, however, surprised to find that, although they knew the value of the characters, they were completely ignorant of the language itself. Yet their sacred books were written in it, and they daily recited the meaningless sounds in their ritual. It was sufficient, they said, that God should understand the prayers they were enjoined to repeat. By an ingenious comparison with the Pehlevi and Persian vocabularies Anquetil at length arrived at a probable translation ; and after his return to Paris he published a French version of the Zend-Avesta (1771).[1] His work was very unduly depreciated by Sir W. Jones, the leading English Orientalist, but it attracted a larger degree of esteem on the Continent, and a German edition by Kleuker appeared at Riga, in 1777, which enjoyed a fair amount of popularity.[2] Both the language and the subject-matter of the Zend-Avesta began to receive the attention of scholars, and those especially who were interested in cuneiform recognised their importance. Tychsen, for example, wrote on the religion of Zoroaster,[3] and Rask on the relation of the language to Sanscrit ;[4] and the same conjunction of studies was preserved in later times by Burnouf, Westergaard, Oppert and Spiegel. Down to the time of Burnouf, however, the knowledge of Zend continued to be very imperfect, and Grotefend was constantly impeded in his attempt to elucidate the language of the cuneiform inscriptions by reference to the very defective work of Anquetil. Burnouf was appointed to the chair of Sanscrit in the Collège de France in 1832, and the

[1] Menant (I.), *Les Langues perdues*, Perse, p. 21.

[2] *Zoroasters lebendiges Wort*, S. F. Kleuker, Riga, 1777.

[3] Tychsen, *De Religionum Zoroastricarum apud veteres gentes Vestigiis.* See Heeren, i. 237.

[4] Rask, *op. cit.* 1826.

idea occurred to him to connect his Sanscrit and Zend studies. He found that a translation of the Yaçna into Sanscrit had been made by two Persian scholars some four hundred years before, while the recollection of Zend was still preserved; and it is entirely due to his labours upon this text that such remarkable progress was made in the study. His 'Commentaire sur le Yaçna' appeared in 1834; and in addition to its other merits it was at once recognised that it afforded the most valuable assistance to the cuneiform student. Indeed, Sir Henry Rawlinson admitted that it was to a great extent in consequence of the knowledge he derived from it that he was enabled to overcome the difficulties of the Behistun inscription. Burnouf's 'Mémoire sur deux Inscriptions cunéiformes' appeared in 1836. It was submitted to the Académie des Inscriptions in March, and finally given to the world on June 1. He considered that the Inscriptions B and G of Niebuhr had been sufficiently worked upon; and if additional results were to be obtained they should be sought from fresh materials.[1] Although Schulz's papers were not yet published, Burnouf obtained access to them; and found they included two trilingual inscriptions from Elvend near Hamadan, copied by Mr. Stewart, and a trilingual from Van.[2] The two Hamadan inscriptions reproduce precisely the same text, except that the name of Darius occurs in one in the place of Xerxes in the other. Comparing these with the trilingual of Xerxes at Van, he found that the first two paragraphs are the same in both; but the last paragraph of the Van inscription is not found at Hamadan. At Persepolis the whole of the Hamadan inscription is repeated on the Anta of the Porch to the Palace of Darius; and considerably more besides. But the

[1] *Mémoire*, p. 8. [2] See above, p. 96.

additional portion does not correspond to that found in the last paragraph at Van. The whole of it was copied long before by Le Bruyn (No. 131). Burnouf next observed that the inscription on the sculptured stairs—the A of Niebuhr—bears a strong resemblance to those just mentioned; but the beginning is clearly imperfect. Ouseley, however, had published a five-lined inscription from Persepolis, which corresponds exactly to the Darius at Hamadan; and Grotefend pointed out that it was probably the beginning of the A inscription.[1] With this addition the A runs for a time parallel to the Hamadan, while at its close it corresponds to the Le Bruyn. Burnouf had thus a considerable number of copies of the same text, and by careful collation he sought to eliminate the errors due to the engraver or the transcriber. By these means he obtained a correct recension of the Hamadan inscription upon which his work was chiefly founded. But there was another to which he made frequent reference, especially towards the close of his Memoir. This is the I inscription of Niebuhr, which is copied from the outside wall, on the southern side of the great platform of Persepolis.[2]

It will be recollected that Grotefend had called attention to this inscription in 1832, and had pointed out that it evidently contained a long list of proper names.[3] Whether this suggestion ever reached Burnouf it is impossible to say, but it is certain he made it an early object of study; and from it he derived the cuneiform sign 'B,' with which he signed his letters to Lassen.

The method he pursued to determine the value of an unknown sign was to collect all the words in which

[1] Ouseley (Sir W.), vol. ii. Pl. 46; Burnouf, *Mémoire*, pp. 9, 17.
[2] Niebuhr, vol. ii. Pl. 31, p. 123. [3] See above, p. 187.

it occurred, and endeavour to assign to it a letter, from among those not already rigorously determined, that would produce a word for which some meaning might be found by comparing it with Zend. For example, the word with which the Darius at Hamadan begins consists of only two letters, which, according to Grotefend, would yield *vu*. But Burnouf could make no sense out of this, and he accordingly substituted a *b* for the first letter (). The result was that he could not only extract a sense out of *bu*—which he compared with the Sanscrit *bhû* and *bû* 'to be,' but two or three other words were also rendered intelligible by the same change.[1] The consideration, however, that finally settled the matter was the discovery of a name in the I inscription, which, upon the supposition that the letter in question was a *b* would yield 'Bakhtroch,' and this he had no difficulty in identifying with Bactria. Hence he altered the *v* of Grotefend into a *b* without apparently recognising that he merely restored the value originally given to that sign by Münter.[2]

Unfortunately, his method did not lead to very important results, for it only enabled him to add two additional values correctly. Both of these were suggested to him by the second word in this same Hamadan Inscription.[3] The word occurs also in the B and G inscriptions, where it was transliterated by Grotefend *e gh r e*. Burnouf accepted the change of the initial *e* () into *i*, which was made by St. Martin, without approaching nearer to the correct value, which is in fact a *v*. The emendation of the second letter lay ready at hand, and

[1] Burnouf, *Mémoire*, p. 29.

[2] *Ib. p.* 25.

[3]

				
Grotefend	*e*	*gh*	*r*	*e*
St. Martin	*i*	*e*	*r*	*e*
Burnouf	*i*	*z*	*r*	*k*
Correct	*v*(*a*)	*z*	*r*(*a*)	*k*(*a*)

could not well be longer overlooked. Since Rask had identified the sign for *m*, this particular sign (𐎶) was the only one that required alteration in order to read *Aur m z da*,[1] and it was therefore inevitable that Grotefend's *gh* should at length be surrendered for a *z*; the only wonder is that this change should have been so long delayed.[2] The emendation of the last letter of the word (𐎴) displays an entirely different order of ingenuity. The letter occurs in only seven different words in all the inscriptions of Niebuhr, Le Bruyn, and Schulz but in one instance it is the initial sign in a word of which the others are *t p d h u k*. It was certainly no common feat of imagination that led Burnouf to see that if a *k* were to precede this remarkable agglomeration, the province of Kappadocia would turn up. By these means, however, he got rid of another of Grotefend's *e*'s, and altered it into a *k*, which proved to be correct. Having thus changed *e gh r e* into *i z r k*, the next step was to find some similar word in Zend that might suggest its meaning. This, however, was not easy; the nearest he could think of was 'yazata,' which might bear to be translated 'divine.'[3]

Such was the method that enabled Burnouf to restore one correct value, *b*, that had been recently neglected, and to add two others, *z* and *k*, to the alphabet. He was on the point of increasing the number of correct values by two or three others, but unfortunately he hesitated to yield to his first intuition. In the twelfth line of the I inscription he found a word which, according to his alphabet he transliterated 'Arion.'[4]

[1] See above, p. 182. [2] *Mémoire*, p. 38.

[3] The true transliteration is 'vazraka,' and its meaning 'great.' See Spiegel, p. 46.

[4]

𐎠 ·	𐎼 ·	𐎹 ·	𐎢 ·	𐎽	
Burnouf	*a*	*r*	*i*	*o*	*n*
Correct	*a*	*r*	*m*	*i*	*n*(*a*)

It occurred in a position in the geographical list that would naturally suggest that it indicated 'Armenia,' and to obtain this result it was only necessary to change the sign (𒁹) which he read *i* into *m*. There was a farther reason that appeared to justify this alteration. In the Hamadan inscription the same sign occurs in *bu i om*, which he translated 'excellent'; but if it were permitted to alter the *i* into *m* we should obtain *bumom*, 'earth.' The meaning of the sentence would then be: 'He has given [or created] this earth; he has given [or created] this heaven,' which would be an evident improvement in the sense.[1] He would not, however, allow that the alphabet could include more than one *m*, and he was not prepared to sacrifice the *m* (𒈠) discovered by Rask in the genitive termination *anam*. Thus he narrowly missed adding the *m* (𒁹) before *i* to the number of his correct values. So also in line 11 there occurs a word he reads *ayura*, but by the change of the *y* into *th* he would arrive at 'Athura,' the ancient 'Aturia.'[2] This change was farther sanctioned by another name, which his system transliterated *pryi*; but by the hypothesis under consideration, it would become *prthi*, a manifest form for 'Parthia.' Moreover, the same alteration would introduce an important improvement in the word for 'king,' which would then read *khchâhthôh* (from the Zend *khchathrô*) in place of *khchâhyôh*.[3] Notwithstanding all these probabilities, he finally rejected the alteration and lost the addition of another correct value. It is interesting also to

[1] *Mémoire*, p. 149.

[2] *Ib.* p. 138:

	𒀀	𒁹	𒌑	𒊑	𒀀
Burnouf	*a*	*y*	*u*	*r*	*a*
Correct	*a*	*th*	*w*	*r*	*â*

[3] *Mémoire*, p. 151.

observe how nearly he approached the correct value of Grotefend's *h* (𐎧, No. 27). He perceived that if it were changed into a *y*, it would yield *yuna* in the twelfth line, which there could be no doubt would indicate 'Ionia.' As it is, however, he retained the incorrect value; and he could find no satisfactory explanation of *huna*; for he, of course, rejected 'Huns' as an evident anachronism.[1] It would be tedious and unnecessary to go through the other signs to which he gave new values, for they unfortunately all turned out to be wrong. Indeed, if his services to decipherment were to be estimated by this test alone, they would not rank higher than those of St. Martin or Rask; for although he lays claim to have ascertained the value of twelve characters, eight of these are erroneous, one (the *b*) fairly belongs to Münter, another (the *a*) to Grotefend, and only two remain to be placed to his own credit: precisely the same number as were contributed by St. Martin and Rask. His alphabet gives definite values to thirty cuneiform signs and an uncertain value to three others.[2] Following the analogy of Zend, he allots a separate sign to the long and short values of each of the vowels *a*, *i*, *u*, and in this he considers he has reached 'a result that should satisfy criticism.' With respect to the consonants, however, he agrees with the maxim of Rask, and strives as far as possible to avoid according more than one sign to each. He has, however, found it difficult to avoid giving two signs to *l* and *h*, and no less than four to *gh*. As regards *l* or *h*, he introduces the second signs apologetically, followed by a mark of interrogation, indicating that they may be variants or defective signs. We now know there is no well-authenticated *l* in the language, and his first sign

[1] *Mémoire*, p. 148.

[2] *Ib.* p. 158.

turned out to be *d* before *i* (𒁹) and the other *r* before *u* (𒊭). He was equally unfortunate with regard to *h*, neither of his signs for that letter being correct. He felt that the four signs for *gh* required explanation. He places only one among the thirty definite values in his alphabet. The others he labels as uncertain. (These are 𒄩, 𒊭, 𒄩.) He thought that a comparison of these would convince the student that they are composed of exactly the same elements, so that they seem to differ from each other only by the caprice of the engraver, who has arranged the wedges according to his fancy, while he has neither altered their form nor increased nor diminished their number.[1] He recognised, however, the objection that all cuneiform writing consists of the same elements, and that the sole difference of one sign from another consists in the arrangement of the wedges. He was forced to fall back upon the impossibility of assigning different values to these signs and at the same time preserving any sense in the words where they occur. The second *gh* (𒄩) he considered justified by its occurrence in the word he thought must be 'çughd,'[2] the third (𒊭) because it would enable him to read 'baghem,' 'destiny,' and the fourth (𒄩) by its completing the sense of '*gh*udraha,' which he thought denoted the Gordyans.[3] In this latter case the correct transliteration is 'm'udray'; but it is not likely, even if he had read the word correctly, he would have detected in this form the name of Egypt. As a matter of fact, the first *gh*, which he has put in his alphabet (𒄩, 34) as the usual form, is *d* before *u*; the second (𒄩) is *g* before *u*; the third (𒊭, 32) is *j* before *i*; the fourth (𒄩, 33) is *m* before *u*.

Grotefend thought he found four and St. Martin six signs for *e*, but Burnouf correctly excluded that letter

[1] *Mémoire*, p. 157. [2] *Ib.* p. 154. [3] *Ib.* p. 133.

altogether from his alphabet. He, however, incorrectly admits one sign for *ô* long. He considers the absence of *th*, a form that occurs frequently in Zend, is probably due to the scarcity of documents. The want of the palatals, *tch* and *dj*, may perhaps be assigned to the same cause; though more probably it arises from the nature of the alphabet itself, for these letters are only developments of the consonants *k* and *g*.[1]

Burnouf acknowledges his obligation to Grotefend for twelve letters; but these should properly be raised to fifteen.[2] The twelve he admits include eight correct values and four incorrect. The three he leaves unacknowledged are *t* (24), *u* (36), and *a* (41), all of which are correct, and they raise the number of correct values accepted from this source to eleven. Burnouf attributes three of his letters to St. Martin, namely *t*, *u* and *i*: the first two are already accounted for from Grotefend; the *i* is indeed due to St. Martin, but it is wrong. Burnouf rejected the only absolutely correct value found by St. Martin, viz. *v*. Two letters, the *m* and *n*, he refers to Rask, from whom also he must have derived the *q* (25) which he erroneously substitutes for Grotefend's *k*.

[1] *Mémoire*, p. 159.

[2] Correct values from Grotefend, acknowledged by Burnouf, are:

r, d, a (Münter), *f, kh, p, s* or *ç, ch*	8 in all
Incorrect values from Grotefend, *o, u, g, h* . . .	4 in all
12 35 15 27	
Correct values from Grotefend, not acknowledged by Burnouf,	
t, u, a	3 in all
24 36 41	
	15 in all

He credits St. Martin with *t*, because he agreed with him that the central wedge should be drawn slightly lower than the other two (p. 137). He credits the *u* to St. Martin and the *a* to himself, because he says both are short, whereas Grotefend made them long (p. 142–3). But these reasons are clearly insufficient to deprive Grotefend of the merit of having suggested to Burnouf the values of the three letters.

The twelve values which Burnouf credits to his own account include the *a* of Grotefend and the *b* of Münter.[1] There remain the two values which he was the first to fix correctly, viz. *k* (4) and *z* (18); the others are all incorrect. We have thus accounted for twenty-nine signs out of the thirty of his alphabet;[2] the other, the *ng* (28) of Grotefend, he treated as uncertain, but suggested *h*, the true value being *j*(*a*)[3] Besides the thirty just mentioned he gives three other signs, to which he hesitates to assign any value, though he thought they might all represent the sound of *gh*. These are, as we have already explained, the *dj* (32) and the '*k*?' (33) of Grotefend, now ascertained to be *j* before *i*, and *m* before *u*. The other does not appear in Niebuhr's list, and Lassen is the first to assign it a value, *g*, which turned out correct (*g* before *u*).

[1] The twelve correct values claimed to have been discovered by Burnouf are:

		Grotefend	Burnouf		
4		*e*	*k*		Correct
7		*v*	*b*		Correct (from Münter)
16		*o*	*v*		Wrong (from Münter), *ch*
18		*gh*	*z*		Correct
19		uncertain	*l*	?	*d*(*i*)
25		*k*	*q*		*k*(*a*)
22		*th*	*dh*		*t*(*u*)
26		*i*	*y*		*th*
29		*h*	*î*		*m*(*i*)
34		*z*	*gh*		*d*(*u*)
40		*sr*	*l*		*r*(*u*)
41		*a*	*a*		*h*(*a*), Correct (from Grotefend)

Correct values

[2] *I.e.* fifteen from Grotefend, one, *i*, from St. Martin, two from Rask, and eleven of his own: that is, deducting the *a* of Grotefend already included. As we have seen, he credited himself with the *b* of Münter, which Grotefend did not accept—twenty-nine in all.

[3] Rawlinson; *z*(*j*)*i*, Oppert.

Burnouf dropped one letter entirely out of his alphabet (𐎽, No 13): the *n* that completed the *bun* or 'stirps' of Grotefend. Since Rask had found the true sign for *n*, a second *n* might well seem to be redundant;[1] and this supposition was confirmed by finding the sign written at Hamadan with three horizontal wedges instead of with two: a difference that transformed it into a *p*. Burnouf accordingly thought the other form was an error of the copyist, and he read *pup*, upon which he confesses neither Zend nor Sanscrit could throw any light; though from the context it evidently means 'son,' and may therefore possibly be a monogram for the Zend *puthra*.[2] He trusted, however, that future research would re-establish the ejected sign; in which case he proposed to give it the value of *th*, and to read *puth*. It was, in fact, afterwards found to be a genuine sign entirely distinct from *p*, and it has received the value of *tr* or *thr*, which has completed the transformation of *bun* or *pun* into *puthra*.

To sum up: of the thirty-three different cuneiform signs in Niebuhr's list for which values have been ultimately found, Burnouf knew only sixteen correctly (two from Münter, *a* and *b*; ten from Grotefend; two from Rask and two from himself), or not quite one half.[3] Yet with such imperfect materials to work with he was able to render important service in the matter of translation. It is obvious that, according as the letters became known, and the words of the new language began to be made out, the task of finding their meaning would depend upon the knowledge of

[1] Burnouf, *Mémoire*, p. 110. [2] *Ib.* pp. 113, 115.

[3] *I.e.* 2 from Münter, *a*, *b*
10 from Grotefend, *r*, *d*, *f*, *kh*, *p*, *s* or *ç*, *ch*, *t*, *u*, *a* (41)
2 from Rask, *n*, *m*
2 from himself, *k*, *z*
16

the languages most nearly akin, and upon the acumen with which the interpreter could apply the resources at his disposal. In other words, the task would pass from the decipherer to the translator; and it is in this department that Burnouf has earned the greatest distinction. Although he could command only a limited number of correct values, and consequently his transliteration was still extremely imperfect, yet his knowledge of Zend, which was greater than that of any other scholar then living, enabled him to make sense of many of these crude forms and for the first time to approach to a correct translation of the words that were not simply proper names. When he began his labours, there were apparently only two words, 'king' and 'son,' that were correctly read, in addition to a few proper names, such as Achaemenian, Hystaspes, Darius, Xerxes, Cyrus and Persia;[1] but to these both Grotefend and St. Martin had accumulated a vast number of worthless and misleading meanings, from 'the constellation of Moro' down to 'Jamshid.' Burnouf added several correct words to the vocabulary, and he was always able to avoid falling into extravagant error. He showed, for example, that the word Grotefend had taken for the conjunction 'and' was in reality a form of the verb 'to give or create.'[2] He overcame the chief difficulty in the word he read 'aqunuch'='generator,' really 'ak'unaush,' 'to make,' and read by Grotefend 'florentem.'[3] The word Grotefend translated 'Dominus' he rendered 'this is,' and suggested the possibility of its being 'I am,' which turned out to be its correct meaning. Besides these contributions, he recognised the demonstrative pronoun 'this' (*aim* for *avam*, 'ce'); and he added the words 'heaven,' 'man,' 'master,' 'province,'

[1] Burnouf, *Mémoire*, p. 166. [2] *Ib.* p. 58.
[3] *Ib.* p. 82. *Cf.* Spiegel, p. 47.

'world,' and some others.[1] The great improvement in translation that resulted will be best appreciated by a comparison. The text of the first paragraph in the Hamadan inscription, translated by Burnouf, is word for word the same as that of the Le Bruyn (No. 131) translated by Grotefend, except that 'Darius' in the former is 'Xerxes' in the latter. We have placed the translation of Burnouf opposite that of Grotefend.

PARAGRAPH I

Grotefend, Le Bruyn 131[2]	*Burnouf, Hamadan, Darius O*[3]
Pius probus[4] Oromasdis cultor	L'être divin [est] Ormuzd
hanc constellationem sanctam	il le Homa excellent
et hunc diem	a donné ; il ce
coelestem et illum defunctum	ciel a donné ; il l'homme
eumque lumine fulgentem	a donné ; il la nourriture
et defuncti [filium]	a donné à l'homme ;
hunc Xerxem regem	il Darius roi
florentem summum	a engendré ce
quorumlibet regem	des braves roi,
summum quorumlibet	ce des braves
amplificet	chef.

Paraphrase of above[5]	*Correct Version of Inscr. O*[6]
Ormuzd [est] l'être divin ;	Great God is Ormuzd
il a donné le Homa excellent :	who this earth created,
il a donné le ciel :	who that heaven created,
il a donné l'homme :	who man created,
il a donné la nourriture	who happiness has created
à l'homme : il a engendré	for man : who has made
Darius roi,	Darius king,
ce roi des braves,	the one king of many,
ce chef	the one Lord
des braves.	of many.

[1] *Mémoire*, pp. 59–60, 89, 95, 100. In Grotefend these are represented by 'coelestem,' 'defunctum,' amplificet,' 'populorum.'

[2] Heeren (ed. 1815), vol. i. p. 601. [3] *Mémoire*, Pl. 2 and 3.

[4] Elsewhere 'fortis.'

[5] *Mémoire*, p. 119. Burnouf suspected, as we have said, that the word he transliterated 'buiom' and translated 'excellent' should be 'bumom' and mean 'earth': 'He has given this earth' (p. 149). The change of the *i* into *m* turned out afterwards to be correct, and the word 'bum'im' does signify 'earth,' the passage being 'who created this earth.'

[6] See Spiegel, p. 47.

PARAGRAPH II

Grotefend	*Burnouf*
Dominus	Ceci est
Xerxes rex	Darius roi
fortis rex	divin roi
regum	des rois
rex populorum	Roi des provinces
quorumlibet purorum rex	qui produisent les braves, roi
collegii puri	du monde excellent
probi vi	divin redoubtable
maxima [praediti] Darii	protecteur, de Goshtasp
stirps mundi rectoris	fils, Achéménide
Djemschidis	

Paraphrase of above	*Correct Version of Inscription O*
Ceci [est]	I am
Darius roi	Darius the great King,
divin, roi	
des rois,	King of Kings,
roi des provinces,	King of countries
qui produisent les braves,	which consist of many races,
roi du monde excellent	king of this great earth
[et] divin; redoutable,	afar and near,
protecteur: fils	
du Goshtasp Achéménide.	son of Hystaspes the Achaemenian.

A comparison of the two translations with the final version will show at a glance how vastly superior Burnouf's rendering was to that of his predecessor. Not the least important of his contributions to the work of translation was the identification of the names of some of the provinces of Darius, which are contained in the I inscription. We have already observed that Grotefend had attempted a translation of this inscription in 1832;[1] and in 1836 he again drew attention to the circumstance that it contained a series of geographical names. The list included no less than twenty-four proper names, some of which were entirely beyond Burnouf's power to decipher; but he made an attempt to read sixteen, and out of these eight were

[1] *Göttingen Anzeigen* (1832), p. 122. Holtzman (A.), *Beiträge*, p. 16.

correct. He thus added Persia, Media, Babylon, Arabia, Cappadocia, Sarangia, Bactria and Sogdiana to the names deciphered from the cuneiform;[1] and we have seen how nearly he arrived at four more—Athura (or Assyria), Armenia, Ionia[2] and Parthia.

Among his contributions to a knowledge of the grammar, he pointed out that the change of Grotefend's *o* into *m* brought the accusative singular into line with the Zend and Sanscrit; the genitive *aha* is also found in Zend, and both languages alike use it as a dative. A nominative ending in *oh* has also its counterpart in the Zend termination in *o*. He indicated the apparent barbarism that treats the nominative case as inherent in the word itself; so that the case-ending is appended to it without modification, as if we wrote 'dominus-um' for 'dominum,' or 'dominus-i' for 'domini.'[3]

He inferred from the two words 'Aurmzda' and 'izrk' that cases occur in which both the vowels and the aspirate are suppressed; and he concluded that the system of cuneiform writing could not have been originally applied to express a Sanscrit or Zend language, in both of which the vowel is rigorously represented. He conjectured also that the cuneiform signs for the vowels might include an aspirate that rendered its separate expression unnecessary.[4] 'There is therefore an evident disagreement between the language of the inscriptions and the characters in

[1] *Mémoire*, pp. 133, 138, 146, 154, 155. Grotefend had already detected Persia.

[2] *Ib.* p. 148. He considers Ionia the probable reading, but he cannot yet admit it decisively. Some writers add Aria to Burnouf's correct discoveries (*J. R. A. S.* x. 12, *note*, Rawlinson), but the word he translates 'Arion' and identifies with Arran, between the Caspian and Black Seas, occurs in line 12 and signifies Armenia. The word for Aria is in the sixteenth line, and he identifies it with Haroyu of the Parsees, the Indian Sarayu (p. 155).

[3] *Mémoire*, pp. 40, 61, 65–6.

[4] *Ib.* pp. 41–2, 55.

which they are written'; and this he ascribed 'to the influence of a system of transcription of Semitic origin.'[1] The discovery that there was a marked discrepancy between the mode of writing and the characteristics of an Indo-European language, now announced for the first time, was soon to receive very ample confirmation, though it was no small surprise to most scholars when the origin of the writing was traced, not to Semitic, but to Turanian sources. In opposition to the opinion of Grotefend, Burnouf thought that the greater simplicity of the mode of writing in the first Persepolitan column indicated its later development, and he showed that the language was not identical with Zend, as Grotefend at first imagined, but a dialect less pure than Zend, and in actual process of developing into a later form.[2] Indeed it already exhibited by its interchange of letters some of the peculiarities noticed in modern Persian. He has no doubt that it was the living language of the court of Darius; and it is peculiarly interesting, inasmuch as its existence fully establishes the greater antiquity of Zend, and removes for ever all the doubts that had arisen as to the authenticity of that sacred language.[3]

We have already said that Burnouf was connected by ties of friendship with Lassen from an early age. Lassen was a Norwegian, born at Bergen in 1800, and consequently a year older than his friend. He was educated at Christiania, and at the age of twenty-two he left Norway to continue his studies at Heidelberg. He obtained a travelling studentship from the Prussian Government, and visited London and Paris in the years 1824–6. During his stay in the latter capital he made the acquaintance of Burnouf, and collaborated with him

[1] *Mémoire*, pp. 87, 161. [2] *Ib.* p. 163.
[3] *Ib.* pp. 57, 108, 163, 165.

in the production of the 'Essai sur le Pali' (1826). On his return to Germany he settled at Bonn, whither he was attracted by the presence of Schlegel and Bopp. Like them, he was devoted to the study of Sanscrit and the literature of India; and in conjunction with Schlegel he became the founder of Sanscrit philology in Germany. In 1829, he assisted him in the publication of the Râmâyana, and subsequently edited other ancient texts. In 1830, he received a Professorship at the University with the munificent stipend of three hundred thalers, or about forty-five pounds, a year; and ten years later, when he had attained a wide celebrity, a chair of Indian Languages and Literature was created for him with a salary of seven hundred thalers. Here he spent his life, writing and lecturing on his favourite studies, which also included modern Persian and English literature. His chief works were the 'Prakrit Grammatik' (1837), the Vendidad (1852), and notably the 'Indische Alterthumskunde,' begun in 1847 and continued down to 1867.

Lassen was troubled during the greater portion of his life by a weakness of sight, which from 1840 became a serious impediment to his studies. His last lectures were delivered in the session 1868–9, but he lived on to 1876, when he died in the city which partly from his own labours had acquired the name of 'the second Benares, on the shore of a second Ganges.'

When he left Paris in 1826 he continued to correspond with Burnouf, and received letters from him subscribed with the cuneiform sign for B (). Burnouf had in fact long devoted himself to cuneiform studies, as is apparent from his edition of the Yaçna in 1833; but it is not stated when Lassen first directed his attention to the same subject. Both scholars published their essays upon it in 1836. When Burnouf com-

municated his Memoir to the Academy of Inscriptions, in March 1836, Lassen confesses that he was entirely taken by surprise.[1] His own Memoir on the subject was already in the press, and his preface is dated in May. Both essays were published about the same time, though we cannot say which had the actual priority of appearance. It is perfectly certain that neither scholar was dependent upon the published work of the other, and if they had not been personal friends, the question of the complete independence of their discoveries could never have arisen. As it is, however, we know that in the summer preceding the publication of the Memoirs, Burnouf visited Bonn, and had much conversation with Lassen on the subject of their common pursuits.[2] He told him that he had 'deciphered the names of all the old Persian provinces,' which sufficiently indicated the direction of his studies; and it is quite possible that he told him also of his identification of the letters *k* and *z* as well as *b*. At all events, his Memoir preceded by a clear month (April) the writing of Lassen's preface, and he is entitled to claim these two letters. Whatever confidences Burnouf may have imparted, Lassen was evidently more reticent, for although the discoveries of of the Bonn professor embraced the re-discovered *b* of Münter and the *k* and *z* of Burnouf, they include also several other correct values of which Burnouf had no knowledge.

Lassen was not without enemies, and among them the bitterest was Holtzmann, whom we shall afterwards meet as a contributor to cuneiform studies. It appears that Lassen, writing to a friend in November 1835, expressed great surprise to find that Burnouf had deciphered the names of the Persian provinces.

[1] *Die Altpersischen Keilinschriften* (Bonn, 1836), preface, p. iv.

[2] Holtzmann, *Beiträge*, p. 9.

Holtzmann took this to mean that Lassen had till then known nothing of either the I inscription or the Persian provinces, and that he had borrowed the whole idea of his book and part of its substance from his friend. There is, however, nothing inconsistent with the far more probable assumption that he had been at work upon it long before the summer visit of Burnouf, and was possibly annoyed as well as surprised to find that his friend had gone so far upon the same track. Much has been said of this matter, and it has even been attempted to raise it to the dignity of a grave literary scandal; but it seems to have originated in a misunderstanding of Holtzmann, prompted possibly by personal antipathy, and to have been fostered by those unamiable persons who love to sow discord, and whose delight it is to sever friendships that are the chief joy of life. Happily, in this case their efforts were unsuccessful. It is certain at least that the friendly relations between the two scholars were never interrupted, and M. Jacquet, who knew both, said that they had worked simultaneously and without communication with each other.[1] It is quite possible also that Grotefend's previous mention of the inscription had escaped Lassen's notice. However this may be, we give his own account of the discovery. He tells us he was attracted to the I inscription by recollecting the statement of Herodotus that Darius set up a column on the banks of the Bosphorus with an inscription in Assyrian and Greek, recording the names of the nations that had followed his banner. He considered that the sculptured staircase at Persepolis undoubtedly portrayed the representatives of various nations bearing tribute to the great King, and he thought that there must be a record of their names

[1] *Journal Asiatique* (3e série), v. 372.

somewhere among the ruins. Accordingly, with such assistance as he could obtain from Grotefend's alphabet, he examined the various inscriptions in Niebuhr and Le Bruyn, till at length he discovered what he sought in the I inscription of the former.[1] It was natural to suppose that the nations would be arranged in geographical order and follow somewhat the same succession as in Herodotus. The names given by the Greek historian, some of which are also found in the Zend-Avesta, would afford a clue to their pronunciation in the cuneiform language, and he might hope with this assistance to carry on the work so successfully begun by Grotefend. It was in consequence of the discovery of the names of the three kings in the B and G inscriptions that Grotefend had been able to fix the values of some of the signs; and it was natural to suppose that the list now brought to light, which contained twenty-four proper names, would yield results of proportionately greater importance. Indeed Lassen believed that he had by this means found the values of almost all the signs that still remained doubtful or unknown. Many other scholars had already indulged the same delusion. St. Martin boasted that his system was '*à l'abri de la critique*.'[2] Burnouf felt convinced that after his own labours 'there could be no further doubt except with reference to the letters that rarely occur.'[3] Lassen was certainly more successful than any of his predecessors, Grotefend alone excepted. He can lay an indisputable claim to having correctly deciphered six additional signs; and this number may be raised to eight if, as is not improbable, he independently discovered the *k* and *z* of Burnouf; and to ten, if we allow two other letters to pass, the *w* ( , No. 10)

[1] Lassen, p. 15. [2] Burnouf, *Mémoire*, p. 2.
[3] *Ib.* p. 128.

and the *t* ( , No. 13), which he brought very close to their true values of *v* and *tr*—or *ti* as Spiegel writes it.[1]

At the time we have now reached, the forty-two signs collected by Niebuhr had been reduced to thirty-three by the elimination of the diagonal and of eight others found to be defective. Lassen accounted for all the thirty-three that remained, and he added three others he found elsewhere. Of these one () is treated by Grotefend as a defective sign for *n*; but it turned out to be a genuine letter.[2] Burnouf was the first to recognise its claim, and it figures as one of his three conjectural signs for *gh*. Lassen gives it the definite value of *g*, which was correct, for it was eventually determined as *g* before *u*. The two other signs he added, () *t* and () *v*, were both ascertained to be defective, and he subsequently dropped them from his alphabet. At this period, therefore, he admitted thirty-four genuine signs and two defective. His alphabet contained twenty-three correct values as opposed to the thirteen of Grotefend and the sixteen of Burnouf. It was made up of the

2 from Münter—*a* and *b*;
10 from Grotefend—*s* (or *ç*), *r*, *d*, *p*, *t* (24), *u* (36), *sch* (or *š*[3]), *f*, *a* (41) and *kh* or *k*—the same as those accepted by Burnouf;
1 from St. Martin—*v*;
2 from Rask—*m* and *n*;
2 deciphered simultaneously with Burnouf—*k* and *z*;
6 added by himself—*i*, *t* (22), *m*, *d*, *g* (35), *g* (44)—

twenty-three in all. There were also two added by himself nearly correct—*w* (10), *t* (13), which, as approximate

[1] Rawlinson generously credits him with twelve (*J. R. A. S.* x. 4).

[2] See Grotefend's alphabet in Burnouf, Pl. 1.

[3] He states that by *š* he means to indicate the same sound as Grotefend by *sch* (*Altpers. Keil.* p. 24).

values, may be allowed to pass, especially in consideration of the German pronunciation of *w*. Nine were incorrect—*i* (16), *k* (19), *o* (25), *z* (26), *h* (27), *n* (28), *g* (32), *g* (33), *s* (40).

But it contained a peculiarity of its own into which Lassen was betrayed by a desire to press the grammatical forms of Zend upon the cuneiform language. In the first place he insisted with not less force than Burnouf, in distinguishing the long and short vowels. Each of the vowels *a*, *i*, *u* are accordingly allotted two distinct signs, and one of his defective signs is pressed into the service in order to secure a *û*. But in addition to this his *a* (𐎠𐎼), when it occurs in the middle of a word, takes the value of *ang*; and in a similar position his *î* and *û* may become *y* and *v*. Still more remarkable is his treatment of diphthongs. He observed three instances in which two signs are seen frequently to follow each other. Of one of these accidental combinations he made a long *ê*,[1] of the second an *ô*[2] and of the third a *q*.[3] He forfeited much of the advantage of his greater command of correct values by falling into these errors. He, however, boldly recognised that some consonants are represented by more than one cuneiform sign, among which he includes *t* with four signs; *s*, *v*, *n* and *m* with two each. He was not uniformly correct in the signs he allotted nor in their number; but if he gave too many to *t*, which has only two, he did not give enough to *m*, which has three.

Lassen gave full credit to Grotefend for his ingenious discovery, and he admitted that the values established

[1] 𐎡, *h* (really *y*); 𐎲, *i* = *ê*.

[2] 𐎠 (no independent value given, but in composition of the diphthong he treats it as *a*: it is really *k*); 𐎠𐎻 *u* = *ô*.

[3] 𐎠𐎻, *u*; 𐎡𐎹, *w* (really *v*) = *q*.

upon the authority of the three proper names were in all probability correct. But, so far as was known, Grotefend had never published any account of the method he followed to determine the other signs, a method that resulted in the production of words that had no resemblance to any human language, and that could not in fact be pronounced by any human tongue. Lassen did not put himself forward as an opponent of Grotefend, but as a continuator of his work from the point where he considered his predecessor had left it.[1] He would not even accept his reading of 'Cyrus' in the Murgab inscription, and in this his scepticism landed him in serious error. Lassen's method was much the same as that of Burnouf. The signs not explained in the three proper names he regarded as doubtful or unknown, and he sought for them elsewhere especially in the proper names in the I inscription, where it might be possible to determine their sound by their occurrence in a word identified as that of some well-known country or province. The result of his special study of this text was that he made out correctly no less than nineteen of the twenty-four names it contains, which compares favourably with the eight of Burnouf. But in addition to these he added three that are not to be found in the original, by fancying he saw proper names in what are in fact merely common words. His nineteen names, however, provided him with abundant material to continue the work of decipherment.

One result of his study became immediately apparent to him. The constant agglomeration of consonants without the intervention of a vowel proved that in some cases the vowel must be inherent in the consonant. He arrived at this conclusion from the word 'Çprd,' which he found as the name of a country

[1] Lassen, p. 6.

in his inscription, and which he concluded was Çapardia, or the Sapeires of Herodotus.[1] We have seen that Burnouf was led to the same inference from the appearance of such forms as 'izrk' and 'Aurmzda.[2] Lassen also observed instances, such as the word 'imam,' where the word is sometimes written with and sometimes without the *a* (𐎠).[3] He at length laid down the rule that an *a* is only distinctly expressed at the beginning of a word, and in the middle before *h* or another vowel. On all other occasions, he says, it is inherent in all the consonants, unless distinctly excluded by the occurrence of another vowel.[4] This rule he afterwards applied more distinctly to the short *a* (𐎡), and adds that it is expressed when it follows the long *â* (𐎢), never after *i* or *u*.[5] In his transliterations he assumes the truth of this rule, and he invariably separates two consonants by the interposition of an *a*.

We have said that he may indisputably claim to have added six new values correctly to the alphabet, *i*, *t*, *m*, *d*, *g* (25), *g* (44).[6] The sign for *i* is the second letter in 'Hystaspes,' and it had been variously given the value of *o* by Grotefend and *y* by St. Martin, according as they followed the form 'Goshtasp' or 'Vyschtaspo.' But Lassen pointed out that the correct Zend form is 'Vistaçpa,' and he consequently preferred *i*, a rendering confirmed by the word 'imam,' 'this,' which corresponds exactly to the Zend and Sanscrit word.[7] This alteration got rid of Burnouf's

[1] I inscription, line 12. Lassen, pp. 89, 152. Rawlinson's *Herod.* iv. 186. [2] See above, p. 219. [3] Lassen, p. 48.

[4] 'Ich glaube nämlich erwiesen zu haben, dass der Vocal "*a*" nur initial, in der Mitte nur vor "*h*" und vor andern Vocalen ausdrücklich durch ein Schriftzeichen geschrieben, allen Consonanten dagegen inhärirt, wenn er nicht durch ein anderes Vocalzeichen ausgeschlossen wird.'—Lassen, p. 16.

[5] *Ib.* p. 53. [6] See above, p. 224.

[7] Lassen, p. 42

(*h*)*ôma* ('excellent'), which went to join the goodly company of Jamshid and the constellation of Moro.

The name 'Katpatuk' for Cappadocia, which Burnouf had already cited with good effect, was turned to farther account by Lassen. He not only used it to confirm the sign for *k* (𐎚) with which it begins and ends; but it enabled him to find a true sign for *t*, by comparison with other words in which it occurs.[1]

We have already said that Burnouf suspected that *m* was the true value of the sign Grotefend made an *h*, and that he only rejected it because he could not reconcile himself to the existence of two signs for the same sound. Lassen was less influenced by such considerations, and when he came to a word that transliterated 'A r — i n,' he had no scruple in completing it by writing an *m* for the unknown letter. Indeed the word occurred exactly where, from geographical considerations he would be led to expect 'Armenia,' and the conclusion would have been irresistible even if it had not been confirmed by the name 'Choras*m*ia' which he observed a little farther down in his list.[2] He made the useful remark that the sign was always preceded by *i*, the full signification of which was not then apparent. We now know that it is precisely the *m* before *i*.

The discovery of the sign for *d* was a happy intuition, and rested on slight evidence. He found in the eighteenth line a name of which he knew four letters, *a i* — *u s*, and he divined that the unknown letter was *d*, which enabled him to read 'Aidus'= India.[3] This guess was confirmed by one other instance only, where the same sign will make '*d*aquista,' which he thought was Zend for 'the wisest.' The word is really 'duvaishtam' and has quite another signification.

[1] Lassen, p. 88. [2] *Ib.* pp. 84, 108. [3] *Ib.* p. 113.

We have not noticed how he arrived at the value *g* for Grotefend's *u*, or for the sign which Grotefend thought was a defective *n*. We find them without explanation in the place where they appear to be mentioned for the first time.[1] The first is *g* before *a*; the other *g* before *u*.

In addition to the six correct values just enumerated, Lassen was also very nearly successful in two others—*w* (𐎺, 10) and *t* (𐎻, 13), really *v* before *a* and *tr* before *a*. The latter he correctly acknowledged in a later work.

The first is the *e* of Grotefend in his 'Darheusch.' Lassen had the Hebrew form of the name 'Darjavesch' in his mind, and no doubt he suspected the presence of the sound of *v* in the Old Persian word. The discovery of the *w* was certainly ingenious, though scarcely convincing, if it had not been supported from other sources.[2] At the end of the B inscription there is a word in the nominative, 'Akun*u*sh,' which is found elsewhere with the accusative termination *m*, but, instead of the *u*, the sign now under discussion is substituted—that is, instead of 'nus,' we have *n* 𐎺 *m*. Now, he argued, it is impossible either in Zend or Sanscrit for a word whose theme ends with *u* to lose it in the accusative; and therefore the unknown sign must either be a *u* or the corresponding half-vocal *v*.[3] But in Darius, the letter that follows is a *u*, and therefore it must be the half-vocal—the only question being whether it is the Zend *v* or *w*. He eventually erroneously decided for the *w*, and pointed to two other words *w*^{a}*sna* and *w*^{a}*z*^{a}*rk*, where as a *w* it would make excellent sense.[4]

With regard to the *t*, it will be recollected that

[1] Lassen, p. 117.

[2] Jacquet considered this correction one of the most ingenious Lassen made (*Journal Asiatique*, 3^{e} Série, vol. v. p. 562).

[3] Lassen, p. 38.

[4] *Ib.* p. 39.

Grotefend gave the value of *n* to a sign that completed the word 'bun,' to which he gave the meaning 'stirps.' This word had long been a stumbling-block to Zend scholars, and Lassen determined to get rid of it. He showed in the first place that the *b* or *p* at the beginning could not be interchangeable, and the word must at all events be treated as 'pun'; but he proposed to alter it still further by reading 'put.' By this means he came nearer to its obvious meaning, 'son'—that is, to the Zend 'putra.' He found this innovation supported by another word, *k s t m*, to which he thought he could attach a Zend meaning.[1]

The nine incorrect values he admitted into his alphabet[2] show little or no improvement on those suggested by Grotefend or Burnouf; and unfortunately the decipherer himself can rarely distinguish the incorrect values from the correct. A glance over a page of Lassen's transliteration will show the havoc these nine incorrect letters have made in his work. But, as we have said, he introduced errors peculiar to himself that were even more fatal than his failure to identify all the signs correctly. For example, he remarked that the sign he took for a short *a* (𐎠) seemed composed of the sign for *n* (𐎽) and an angular wedge which might be an abbreviation of the sign itself. He was led to this hypothesis by comparison with the Zend, where *ă* is clearly a combination of *a* and *n*.[3] He goes farther and gives the short *a* and *n* the guttural sound of *ang*, when it is found before the letter he thought was *h* (𐏁, 27; really *y*), and he cites several instances which he thinks will justify this opinion. He recognises, however, that the rule even thus limited is not always applicable.[4]

[1] Lassen, pp. 41, 119–20.
[2] See above, p. 226.
[3] Lassen, p. 46.
[4] pp. 29, 54.

Another error, due also to the deference he professed for Zend analogies, arose from the supposition that the two letters which he took for *u* and *w* had together the value of *q*. He compared them to the sound of *q* which is produced in Zend by the two letters *sv* or *hv*, the latter being modified into *uv* in the Old Persian.[1] Equally disastrous was his introduction of the two diphthongs *hi* for *ê*, and *au* for *ô*. He observed that these two letters are occasionally found together, and he concluded they must correspond to the Sanscrit diphthong *ai*=*ê* and *au*=*ô*. The occurrence of an *h* for an *a* in one of them was a matter of small difficulty. Indeed he had actually found the *ai*=*ê* in Aidus=India; and suggests that *hi* may be the form it assumes as a medial.[2] The most eccentric peculiarities of his transliteration may be traced to these unfortunate errors. His transformation of *a* into *ng* appears in his 'Aur^{a}ngha M^{a}zdanga' for 'Aurahya Mazdaha.' The diphthong *uv* with the sound of *q* seemed at first to yield a better result. By it he was able to read 'Quar^{a}zmi^{a}h' and 'Ar^{a}q^{a}tis,' which are more suggestive of the true words Chorasmia and Arachosia than the correct forms '*Uv*arazamiya' and 'Hara*uv*atish.'[3] But, on the other hand, it led him to read 'qan' or 'qwan' (Chaonia) for 'Uvaja' (Susa), 'Aq^{a}' for 'Ha*uv*,' Pat^{a}q^{a} for 'patuv,' 'D^{a}qist^{a}n' for 'duvaishtam,' and so forth. The diphthong *hi* (really *yi*) for the long *ê* produced 'tesam' in the place of 'ty^{a}isham.' The diphthong *au* (really *ku*) for the long *ô* was still more disastrous. Burnouf, when he wrote 'aqunuch,' had nearly reached the correct transliteration of 'a*ku*naush,' but it becomes scarcely recognisable in the 'aônus' of Lassen. The first sign of this diphthong had been long since correctly determined by Grotefend as a *k*. But its

[1] Lassen, pp. 38, 107. [2] *Ib.* p. 128.
[3] *Ib.* pp. 107, 112. *Cf.* Spiegel, p. 50.

identification depended in great measure on the belief that Murgab, where it is the first letter in the inscription, represents the ancient Pasargadae, the city of Cyrus. Lassen would by no means accept this as sufficient proof, for even upon that hypothesis the inscription might not necessarily belong to Cyrus. St. Martin read it 'Houschousch,' and conjectured that this name referred to 'Ochus.' Lassen accepted this view, and saw in the first two signs, which he took for *au*, the strongest confirmation that they had the value of the *ô* long in Ochus. In 1845, when the result of his farther studies were published, we find that his original alphabet has undergone considerable improvement. He has suppressed the second signs for each of the vowels *a*, *i* and *u*, and the two diphthongs for the long *ê* and *ô*, that caused so much trouble, have disappeared. We hear no more of the double letters for *q*, nor of the second value *ng* which he ascribed to his initial *a*, now found to be more correctly *h*. He has also struck out the two defective signs he admitted for *t* and *û*. For the rest, the improvement consists chiefly in sweeping away the errors into which his love of Zend analogies had at first hurried him. The only addition he made to the number of his correct values was *thr*, suggested by Grotefend, to which, as we have said, he had previously nearly approached. The remaining signs now correctly represented are due to M. Beer and M. Jacquet, who wrote in the interval that separated the two Memoirs by Lassen.

Lassen's translations are naturally much affected by the nine incorrect values he still retained, and by the errors he introduced himself. Yet if we compare the transliteration and translation of the Le Bruyn No. 131, as given by Burnouf and Lassen, we cannot fail to recognise the superiority of the latter. For the 'Bu izrk' of the one we have 'Baga wazark' of the

other, which closely anticipates the 'Baga vazraka' of the correct version. The 'Omam buiom,' the 'Homa excellent,' is replaced by 'imam buvam,' 'this earth;' and many similar improvements may be noted throughout. Both writers succeeded fairly well in rendering the simple phrases, but great diversity still existed as to the meaning of the obscurer passages. Both alike declare that Auramazda is the creator of heaven and of man; and that he has established Darius or Xerxes as King. But when we proceed to the second paragraph of the inscription our translators go far astray. The passage beginning 'king of countries' is thus variously rendered:[1]

B. oahunâm pl. ôznânam.
L. d^{a}nghunâm ps'uw^{a}znânâm.
S. dahyunâm . par'uv . zanânâm.
Trans. B. [roi] des provinces qui produisent les braves.
L. [rex] populorum bene parentium.
S. [König] der Länder die aus vielen Stämmen bestehen [or more simply by Menant: des pays bien peuplés].

B. âahâhâ buîôhâ izrkâhâ rurôh âpôh.
L. a^{a}nghâhâ bu'mihâ w^{a}z^{a}rkâhâ d'uri^{a}h âpy^{a}h.
S. ahyâyâ . bu'miyâ . vazrakâyâ . d'uraiy . apiy.
Trans. B. [roi] du monde excellent, divin, redoutable, protecteur.
L. [rex] existentis orbis terrarum magni, sustentator, auctor.
S. [König] dieser grossen Erde auch fernhin [or, with Menant: 'de cette vaste terre (qui commande) au loin et auprès'].

[1] Spiegel is taken as representing the correct version. *Cf.* Spiegel, p. 64 (Inscr. C^{a}); Burnouf, Plate III.; Lassen, p. 174; Menant, *Les Achéménides*, p. 53, Inscr. C.

Lassen finishes thus: 'Xerxes, rex magnus: ex voluntate Auramazdis (palatium) domitor Darius rex constituit. Is meus pater. Memet tuere, Auramazdes, heic felicitate: tum hoc ibi palatium, tum hoc patris Darii regis palatium, excelse Auramazdes, tuere heic felicitate'—a passage rendered by Menant: 'Xerxès, le grand roi, déclare: Par la volonté d'Ormuzd, Darius mon père a construit cette demeure. Qu'Ormuzd me protège avec les autres Dieux, qu'Ormuzd avec les autres Dieux protègent mon œuvre et l'œuvre de mon père le roi Darius.' The I inscription, from which Lassen derived so much assistance, fared badly at his hands when he attempted to translate its concluding lines. Even in the list of proper names he committed what must now appear to be the stupendous blunder of mistaking three common words for the names of three provinces of the Empire. The words so honoured are: 'ushkahyâ,' 'darayahyâ,' 'parauvaiy,' which figure as 'Uscangha' (the Uxii), 'Drangha' (the Drangii) and 'Parutah' (the Aparyten).[1]

His transliteration of the others is naturally frequently defective, but nevertheless he identified twenty correctly. The four he failed in are Susa, Arabia, Egypt and Ionia. It would have been difficult for him to recognise either Susa or Egypt, even if his transliteration had been more perfect. The first is represented in the cuneiform by three signs—*u v j*—and reads 'uvaja,' which certainly does not suggest Susa. But Lassen turned the *uv* into *q*; as the last letter in his opinion was *n* (𐎽, 28) he evolved *q'n*, from whence Chaona. The word for Egypt, as correctly transliterated 'M'udray,' would perhaps have been even more embarrassing than his own 'Gudraha,' in which he agreed with Burnouf in recognising 'Gordyene.' The word he read 'Arbela' was correctly translated 'Arabia'

[1] Lassen, pp. 94–100.

by Burnouf; and a somewhat too pedantic learning reconciled him to 'Huns,' which Burnouf had rightly rejected.[1]

[1] Lassen's transliteration of the provinces is as follows:

Pârᵃça, p. 155; Mâd, p. 63; Bâbis'us', p. 67; Ârᵃbâh, p. 69; Âzurâ, p. 79; G'udrâhâ, p. 84; Ârᵃmin, p. 85; Kᵃtpᵃt'uk, p. 88; Çᵃpᵃrd, p. 89; Hunâ, p. 89; Açᵃgᵃrt, p. 101; Pᵃrzᵃwᵃ, p. 102; Zᵃrᵃk, p. 103; Aryᵃwᵃ, p. 105; Bâk'tris', p. 106; Çug'd, p. 106; Qârᵃzmiᵃh, p. 107; Zᵃtᵃgᵃdus, p. 108; Arᵃqᵃtis, p. 112; Aidus, p. 113; Gadâr, p. 114; Çᵃka, p. 114; Mᵃk, p. 114; Qwan, p. 115.

The correct transliteration is:

Pârsa, Mâda, Bâbir'u, Arabâya, Athurâ, M'udrây, Arm'ina, Katapat'uka, Sparda, Yaunâ, Asagarta, Parthava, Zarâñka, Haraiva, Bakhtrish, Sug'da, Uvârazami'ya, Thatag'ush, Harauvatish, Hiñd'ush, Gañdâra, Sakâ, Maka, Uvaja.

Of these Lassen identified twenty correctly:

Persia, Media, Babylon, Assyria, Armenia, Cappadocia, Çapardia (Sparda), Acagartia, Parthae, Zarangae, Areiae (Aria), Bactria, Çugdia, Chorazmia, Sattagadus, Arachosia, India, Gadar (Gandara), Çacae, Maci.

He was wrong in Chaona, Arbela, Gudraha and Hunae (Lassen, *passim*; Spiegel, p. 50; Menant, p. 80). When Jacquet wrote, in 1838, he understood that Lassen had already given up the Huns. *Journal Asiatique* (Oct. 1838), vi. 403.

CHAPTER IV

BEER AND JACQUET TO RAWLINSON—A.D. 1838–1846

THE simultaneous publication of the two essays by Burnouf and Lassen roused considerable interest among those devoted to the obscure problems of cuneiform decipherment. Grotefend, whose attention for the previous twenty years had been chiefly diverted to other pursuits, returned once more to the subject in which he had previously achieved such great success, and in the year following he published 'Neue Beiträge zur Erläuterung der Persepolitanischen Keilschrift.' We have already seen that his mind had by that time lost much of its elasticity, and he displayed more tenacity in defending his old errors than aptitude in recognising the truth of the new discoveries. To some of these, however, he is forced to give a qualified assent.[1] He may indeed claim the merit of having now for the first time fixed the true value of one more character. It may be recollected that the two signs 38 () and 40 () had been long considered to express the same sound. Grotefend first attributed to both the value of *sch*; but in consequence of the Murgab inscription he afterwards considered that the last (40) must denote *sr*. This opinion was not, however, generally accepted. St. Martin preferred *ch* for both, and Lassen *s*. Burnouf, however, suggested

[1] *Beiträge* (Hanover, 1837), p. 17.

ch for the first and *l* for the other. But Grotefend was now disposed to drop the *s* from the last letter (𐎢) and to read *r*, or some slight modification of that sound, corresponding to the pronunciation adopted on the other side of the Tigris for the letter which is rendered an *l* on this side. Accordingly in his translation of the Murgab inscription he writes simply *Kurusch* and elsewhere *Kurhush*. In his revised alphabet it appears as *rh*.[1] Grotefend has also the merit in this tract of being the first to indicate that (𐎧), the *t* of Lassen, might sometimes have the sound of *thr*, as in 'puthra,' and possibly in 'Artakhshathra.' In his alphabet, however, he drops the sound of *r* and makes the value *th*.[2]

In the following year a more important contribution was made by the appearance of two essays, one by E. F. F. Beer in Germany, the other by Eugène Jacquet in France. The former was published in the 'Hallische Allgemeine Zeitung,' the other in four papers inserted in the 'Journal Asiatique' (1838).[3] Beer was a native of Bötzen, where he was born in 1805 and received his early education. He went to Leipzig in 1824 and thenceforth he chiefly devoted himself to the study of Semitic Palaeography. He died in 1841, at the age of thirty-six. Both he and Jacquet showed that Lassen was entirely mistaken in supposing that there were different cuneiform signs to indicate the long and short signs of the vowels *a*, *i*, *u*.[4] They simultaneously discovered the correct values of the two letters 27 (𐎹) and 41 (𐏁). The first, the *h* of Grotefend and Lassen, is ascertained to be *y*; the other, the *a* of Grotefend and the '*a* long' and *ng* of Lassen.

[1] Grotefend, *Beitrage* (1837), pp. 34, 45. See Plate IV. where a misprint makes it look like *rk*.

[2] *Ib.* p. 17. See alphabet in Plate IV. [3] Spiegel, p. 140.

[4] *Zeitschrift für die Kunde des Morgenlandes*, ii. 172 for *i* and *u*; p. 174 for all three. Holtzmann, *Beiträge*, p. 15.

was found to be the aspirate *h*.[1] The remaining corrections are due to the ingenuity of Jacquet alone. Jacquet was born at Brussels, but the whole of his short life was spent at Paris, where he died in 1838 at the age of only twenty-seven. His extraordinary precocity and the wonderful range of his acquirements place him among the most remarkable men of his generation. He was distinguished at school by the critical accuracy of his classical knowledge, and by the zeal with which he applied himself to the geography, history and literature of ancient times. He had scarcely ceased to be a school-boy when we find him studying Oriental languages under the most distinguished masters. He was the pupil of De Chézy in Sanscrit, of Silvestre de Sacy in Arabic and Persian, of Jaubert in Turkish, and Abel Rémusat in Chinese.[2] His studies travelled far beyond the ordinary course of even these learned professors, and embraced the various languages of India, the Malay Archipelago, Java, and even Ethiopia. At the same time he became familiar with most European languages, including Danish and Portuguese. At the age of eighteen, he began to contribute regularly to the 'Journal Asiatique.' It was in its pages that he published his 'Considerations on the Alphabets of the Philippines,' which appeared in 1831, when he had just reached the age of twenty. It at once attracted the attention of M. G. von Humboldt, who wrote to compliment the young author, and who farther showed his appreciation by adopting in his own work most of

[1] As regards the *y*, Lassen always substitutes the palatal *j* for the half-vowel, and Holtzmann follows him; but this was, no doubt, due to the practical exclusion of *y* from the German alphabet. Lassen says that Beer and Jacquet both corrected the sign to *j*, though we know that Jacquet always wrote *y*; and Rawlinson acknowledges that he received the *y* from Lassen. From the time of Benfey (1847) the *y* is finally adopted in German transliterations.

[2] *Mémoire de E. Jacquet*, par Félix Nève (Bruxelles, 1855), p. 10.

Jacquet's conjectures.[1] This was followed by Memoirs on the languages and literature of Polynesia, including the cabalistic writings of Madagascar. From these subjects Jacquet passed to those affecting India. At the age of twenty-four we find him in correspondence with Mr. James Prinsep, the Secretary of the Asiatic Society of Calcutta, and well known as the first decipherer of the Pali alphabet.[2] He has already planned the execution of a 'Corpus Inscriptionum Indicarum,' and is busily occupied collecting materials from every available source. He is associated with Raoul Rochette in the study of Bactrian and Indo-Scythian medals, and his extraordinary capacity as a numismatist is fully recognised. In the midst of these various occupations he found time to devote himself to cuneiform inscriptions, which his knowledge of Zend and Pehlevi qualified him to investigate. From 1835 he was in constant correspondence with Lassen upon this and kindred subjects; and his singular ability enabled him to overcome many difficulties that had baffled previous inquirers. He not only earned distinction in the somewhat arid fields of philology and ethnology, but he was equally alive to the historical and literary aspects of the subjects he investigated. He was particularly interested in tracing the intellectual relations of the people of China, India, and Upper Asia, and he devoted some interesting papers to the connection between the East and West in ancient and mediaeval times. These were mostly written at the age of nineteen to twenty. At nineteen we also find him translating from the Danish and reviewing a tract by Rask on a Pali and Cingalese manuscript. He amused his leisure moments by translating from Chinese and from Sanscrit,

[1] *Mémoire*, par Nève, p. 74. [2] Rawlinson, *J. R. A. S.* x. 41, *note*.

in following the march of Alexander through Bactria, and in studying the history and literature of Buddhism. Jacquet's life was inspired by two passions, devoted attachment to his widowed mother and a boundless love of knowledge. To the one he was ready to forego his hopes of fame: to the other he sacrificed his health. There can be no doubt that his incessant and feverish labours induced the fatal disease that first showed itself in the autumn of 1835, when he was but twenty-four. The last three years of his life were ennobled by an heroic struggle against increasing weakness. In the face of much suffering, he continued his labours to the end; and he died as a scholar might wish to die, seated at his desk, pen in hand, alone among his books and manuscripts, his mind filled to the last moment of consciousness with the work that had occupied his life. Thus passed away one of the most promising scholars of the age. It is possible that the multitude of his acquirements was incompatible with profound knowledge in each of the many subjects he treated. M. Julien contested the accuracy of his Chinese translations; and De Sacy seemed to doubt some other of his qualifications; but he received the enthusiastic applause of many other scholars—of the two Humboldts, of Ritter, Lassen, Burnouf, and Prinsep, each in their several departments.[1]

His essay on Cuneiform Decipherment was among the works he left incomplete. It was in the form of a review of Lassen's recent Memoir, and three papers on the subject appeared during his lifetime in the 'Journal Asiatique,' and a fourth was published shortly after his death.[2] It can scarcely be said that he has gone beyond

[1] *Mémoire*, par Nève, p. 101.

[2] April, May, June, and October, 1838, *Journal Asiatique*, 3e série, vols. v. and vi.

the introduction. The first essays are occupied chiefly with an account of what had been already accomplished in the field of cuneiform research, and with a review of the ethnological points raised by Lassen's treatment of the provinces of Darius. It is only incidentally that he touches upon the language of the inscriptions, and he reserves the discussion of the alphabet to a future paper. Unfortunately, his premature death prevented him from accomplishing his task, and strange to say not a single note could be found among his papers that might be used for the purpose. This is the more remarkable from the frequent references he makes to that portion of his work in which he proposes to explain the points of difference with Lassen, and to the various passages from the inscriptions that he intended to bring forward in support of his views.[1] On other subjects he was in the habit of making the most elaborate notes, and it is scarcely possible to suppose that in a matter of this kind he charged his memory with an accumulation of detached words and phrases collected from the numerous inscriptions then available.

The essays indicate some of the corrections he proposed, but for the reason mentioned we are left very much to conjecture the foundation upon which they were based.

We see, however, that his correction of 27 () from *h* into *y* was suggested by the words read by Lassen 'Arbah' and 'Huna,' which he recognised should be more properly read 'Arabaya' and 'Yuna' (Ionians).[2] Similar etymological considerations led him to the correction of the  *a* into *h*. This letter occurs at the beginning of the words Lassen reads 'ary^{a}w^{a},'

[1] *Mémoire*, p. 77. See *Journal Asiatique*, v. 561, 566, vi. 404, 424, *note*, and *passim*.

[2] *Journal Asiatique*, v. 591, vi. 403.

'ar^{a}q^{a}tis,' and 'Aidhus,' where Jacquet points out that the corresponding Zend forms require an aspirate.[1] In these essays we have only found two other corrections suggested. The first is 10 (), the *e* of Grotefend, which Lassen nearly approached in *w*, but to which Jacquet rightly gives the value of *v*.[2] The other is 26 (), the *i* of Grotefend and *z* of Lassen, which Jacquet changes into *th* in consideration of its occurrence in Assyria (Athuria) and Sattagydes—which he reads 'Thrataghadus' and also (as Lassen adds) in Mithra.[3]

If Jacquet's contributions to the study of cuneiform had been limited to the essays in the 'Journal Asiatique,' they would have been comparatively unimportant. But he was also in correspondence with Lassen on the subject, and he not only communicated to him the result of his investigations, but also the reasons upon which they were based.[4] In 1837, Lassen took part in the foundation of a journal devoted to Oriental subjects —the 'Zeitschrift für die Kunde des Morgenlandes.'[5] Grotefend became a contributor from the commencement,[6] and Lassen reported the progress of cuneiform research as occasion required. His first essay on the subject appeared in 1839,[7] and contained a criticism of the recent writings of Beer and Jacquet; with, as regards the latter writer, some important information derived from his correspondence. From this source we learn that Jacquet recognised the correctness of the value of

[1] *Journal Asiatique*, v. 571 (*cf.* 562), vi. 414, 421.

[2] *Ib.* v. 562, *note.*

[3] *Ib.* v. 592, vi. 419. *Zeitschrift für die Kunde &c.* ii. 171.

[4] Spiegel, p. 140. See *Zeitschrift*, ii. 165.

[5] Spiegel, p. 140.

[6] See his contributions in vols. i. ii. and iii. *Urkunden in Babylonischer Keilschrift.*

[7] *Zeitschrift*, ii. 165.

r, already assigned to 𐎼 by Grotefend; and completed it by determining it to be the *r* before *u*.[1] He was led to this conclusion not only by the occurrence of the letter in 'Kurus,' but also in 'paru,' which compares with the Zend for 'many'—'the king of many lands.' He showed also that 16 (𐏁), the *o* of Grotefend and *i* of Lassen, is really *ch*;[2] and finally 28 (𐎽), the *ng* of Grotefend and *n* of Lassen, he finds to be *z*: which, if not correct, is a considerable improvement. He was led to this conclusion by an ingenious conjecture. The letter is found in the province Lassen transliterated *u w n*, and which, from his theory of the diphthong, he read *q'n* and supposed to denote Chaona. The word occurs first in the list, and Jacquet inferred that it must refer to the capital province, Susa. He did not altogether reject Lassen's *q*, but by changing the *n* into *z*, he got near to what he sought, either in 'uw^{a}z^{a}' or 'q^{a}z^{a}' for Susa.[3] To sum up: Beer and Jacquet both independently found the correct values for 27 (𐏂) *y* and 41 (𐎺) *h*; Jacquet added the correct value of 10 (𐎹) *v*, of 16 (𐏁) *ch* or *c* of 26 (𐏃) *th*; and he completed the value of 40 (𐎼) *r* before *u*.

Beer may thus be credited with having contributed two letters (27 and 41), Jacquet with six (10, 16, 26, 27, 40 and 41). He also suggested that the name of the first province in the I inscription referred to Susa and not to Chaonia, and that Babirus—not Babisus—was the correct reading for Babylon.[4]

The year 1838 was memorable not only for the essays of Beer and Jacquet, but also for the appearance of Major Rawlinson among the number of cuneiform scholars. We have already related how his attention was directed to the subject while he was stationed at

[1] *Zeitschrift*, ii. 169.
[2] *Ib.* p. 172.
[3] *Ib.* p. 173.
[4] *Mémoire*, par Nève, p. 81.

Kermanshah during the years 1835–7, and that he succeeded in making a transcript of two hundred lines, or about one half of the great inscription at Behistun. When he first began the study, in 1835, he was aware that Grotefend had previously 'deciphered some names of the early sovereigns of the house of Achaemenes,' but he could not obtain a copy of the alphabet, nor ascertain from which inscription it had been formed. Rawlinson began upon the two inscriptions he had copied at Elvend, and 'when he proceeded to compare them, he found that the characters coincided throughout, except in certain particular groups, and it was only reasonable to suppose that the groups which were thus brought out and individualised must represent proper names. There were but three of these distinct groups in the two inscriptions,' and they were arranged so as 'to indicate a genealogical succession,' no doubt 'belonging to three consecutive generations of the Persian monarchy; and it so happened that the first three names, of Hystaspes, Darius and Xerxes, which I applied at hazard to the three groups proved to answer and were in fact the true identifications.'[1] This ingenious process was precisely the same as that already followed by Grotefend, which we have described in detail. Rawlinson appears, however, to have divined the method independently, though the application of the three names to the three groups was no doubt suggested to him by what he had heard reported by Grotefend's discovery. He next turned his attention to the first two paragraphs of the Behistun inscription, and by the same means he detected five other proper names, which he identified with Arsames, Ariaramnes, Teispes, Achaemenes and Persia. The recognition of these eight proper names yielded him the values of eighteen

[1] *J. R. A. S.* x. 5.

cuneiform characters, which later study showed he had correctly identified.[1]

Such was the progress he had made down to the autumn of 1836 by his own independent research. Shortly afterwards he received copies of Heeren and Klaproth's writings, where at length he found the alphabets of Grotefend and St. Martin explained; but he writes: 'Far from deriving any assistance from either of these sources, I could not doubt that my knowledge of the character . . . . was much in advance of their respective and in some measure conflicting systems of interpretation.'[2] He had indeed some cause for congratulation, for he had discovered eighteen correct values, while Grotefend was only successful in twelve, though, with the two from Münter, he had at his disposal fourteen in all. St. Martin only made out two letters by his own ingenuity, and disposed altogether of not more than ten.[3]

Having thus greater means at his disposal, Rawlinson succeeded, in the course of 1837, in arriving at an approximate translation of the first two paragraphs of the Behistun inscription, 'which,' he says, 'would have been wholly inexplicable according to the systems of interpretation adopted either by Grotefend or Saint Martin,' the only ones with which he was at that time acquainted. By the end of the year his paper was

[1] Canon Rawlinson explains the process thus: 'Applying to the letters of these names the phonetic values previously obtained from the trio Hystaspes, Darius, Xerxes, twenty-one out of the twenty-eight letters were found exactly to suit their place. The remainder were new forms and furnished the alphabet with four new letters, *m*, *n*, *h*, and *ch*.' (*Memoir of Sir Henry Rawlinson*, p. 320.) Rawlinson himself, however, confessed in 1846: 'I am neither able, nor is it of any consequence after the lapse of so many years, to describe the means by which I ascertained the power of each particular letter, or to discriminate the respective dates of the discoveries.' (*J. R. A. S.* x. 6, *note*.)

[2] *J. R. A. S.* x. 7.

[3] See above, pp. 179, 201.

complete, and on January 1, 1838, he forwarded the translation of the two paragraphs to the Royal Asiatic Society, where it was received on March 14. In April a copy was submitted to the Asiatic Society in Paris, where it excited great interest, and Rawlinson was at once elected an Honorary Member. Steps were at the same time taken to put him in possession of the latest results of European investigation. M. Burnouf sent him his 'Mémoire' of 1836. M. Mohl shortly afterwards forwarded him a copy of the Yaçna. Sir Gore Ouseley, the Vice-President of the Asiatic Society, introduced him to the notice of Lassen, who wrote to him from Bonn in August (1838) to acquaint him with his alphabet and with the corrections made since its appearance in 1836 'as well by others as by myself.'[1] With the valuable assistance thus placed at his disposal, Rawlinson continued to work at his translations during the remainder of 1838 and till the autumn of 1839. So early as January 1839, we learn from Mrs. Rich that he had already succeeded in deciphering a large part of the two hundred lines.[2] He derived the greatest assistance from Burnouf's 'Commentaire sur le Yaçna.' 'To this work,' he says, 'I owe in great measure the success of my translations.' During his stay at Bagdad in 1839 he was in correspondence with Lassen and Burnouf, who informed him of the progress recently made by Beer and Jacquet. Rawlinson, on his part, was rapidly completing his alphabet, and he lost no time in making his friends acquainted with the result. He was surprised to find that the European scholars just about kept pace with his own progress, and that he had little to learn from them,

[1] *Memoir* by Canon Rawlinson, pp. 311–17.

[2] *Babylon and Persepolis*, preface, p. vii. *Cf.* Vaux, *Nineveh and Persepolis*, p. 426.

though perhaps he might be in a position to add something to their knowledge. He observed that Lassen's newest version of the alphabet 'coincided in all essential points with my own,' but that his labours 'have been of no farther assistance to me than in adding one new letter to my alphabet and in confirming opinions which were sometimes conjectural.'[1] Rawlinson had indeed succeeded in working out the whole of the alphabet by his own unaided ingenuity, so that he was accustomed to say that there were only two letters he owed to others: *k*,  No. 4, which he learned from Burnouf, and *y*,  No. 27, from Lassen, who got it from Jacquet.[2]

On the other hand, his contributions to the general advance of the study were necessarily limited. By the time he became known to European scholars they had on their part advanced so far that only four letters of Niebuhr's list remained for which a correct or approximate value had not been found. These were:

19  *k* of Lassen,
28  *z* of Jacquet,
32  *g'* of Lassen,
33  *g* of Lassen.

The appearance of Rawlinson did not, therefore, take place till after the difficulty of the decipherment had been almost completely surmounted without his assistance. When his correspondence with Burnouf and Lassen began, in the autumn of 1838, he was, however, still in time to rectify two out of the four incorrect values.

He found 32 () in the name of Cambyses, where it occurs as the fourth sign, which he transliterated correctly as *j*; $K_a buj_i y$. Hincks afterwards read the

[1] *J. R. A. S.* x. 8–10. [2] *Ib.* x. 10.

sign *zh*(*i*) and Oppert *z*(*j*)*i*; but both these sounds have since yielded to the one proposed by Rawlinson, and it now appears as *j* before *i*. But Rawlinson's most striking success was with the last letter, 33 (), another *g* of Lassen. In his letter to Burnouf, he proposed to substitute *m*.[1] It is the initial letter in the name Lassen read 'Gudrâha' and thought indicated the Gordyaei. Rawlinson suggested the name was M'udraya, and should be compared with the Phoenician 'Mŭdra' and the Hebrew 'Mitsraim,' and signified, in fact, Egypt. Both of these emendations were, however, rejected by Lassen.[2]

There is another sign which came under discussion at this time. It will be recollected that we have assigned 13 () to Lassen, who gave it the approximate value of *t*. Rawlinson, however, suggested to Burnouf that its true value is not *t* but *tr*. In this, however, he had been anticipated, as we have seen, by Grotefend in 1837, who suggested *thr*.[3] It is admitted that it is impossible to distinguish between the comparative merits of *tr* and *thr*;[4] and as Rawlinson probably knew nothing of Grotefend's 'Beiträge' at the time, he may be credited with having discerned the correct sound of the sign.[5]

Then, as on subsequent occasions, his great merit lay in the superiority of his translations. He was already in a position to criticise Lassen's efforts in this department with some severity. He thought that Lassen had 'in many cases misunderstood both the etymology of the words and the grammatical structure

[1] *J. R. A. S.* x. 8, *note*. *Cf.* Behistun, Col. I. line 28.

[2] Lassen, *Ueber die Keilinschriften*, 1845 (henceforth referred to as 'Second Memoir'), p. 49. Rawlinson in *J. R. A. S.* x. 8, 17, 130.

[3] *J. R. A. S.* x. 8, 17. See above, p. 238. [4] Spiegel, p. 152.

[5] The German periodicals of 1839 recognised Rawlinson as discoverer of the *tr*. *Dublin University Magazine* (1847), p. 21.

of the language.'[1] When Rawlinson found that he was obliged to renounce the claim to a 'priority of alphabetical discovery,' and that he was continually being anticipated in the values he gave to the signs which he had himself just 'obtained through continued labour,' he was consoled by the reflection that he was 'the first to present to the world a literal and, as I believe, a correct grammatical translation of nearly two hundred lines of cuneiform writing.' Unfortunately, however, he withheld his translation, in the hope of making the accessories more perfect. A host of historical and geographical questions started up in rapid succession, and he was unwilling to limit his task to the series of critical notes which was all he at first contemplated. He accordingly began to recast his Memoir in the autumn of 1839, with the confident hope that it would be ready for publication early in the spring of 1840; but the outbreak of the Afghan War interrupted his literary projects and summoned him to a very different sphere of activity. Before he left, however, he had time to make a second communication to the Asiatic Society, in which he related some of the results of his study. His paper, which was read before a meeting of the Society, contained a '*précis* of the contents of a large part of the Behistun inscription, which differed in no material respect' from the translation he elaborated at a much later date.[2] Indeed, we are told that, so far as the original materials extended, it was 'absolutely identical' with his subsequent work, which, as we shall presently see, was so perfect that later scholarship has found little to correct.[3] This was certainly a great achievement on the part of a young officer of twenty-

[1] *J. R. A. S.* x. 9, 12–13.

[2] His paper is noticed in the *Athenæum*, Jan. 1840. *J. R. A. S.* vol. viii. Report, 1845; *Athenæum*, Nov. 8, 1884.

[3] *J. R. A. S.* x. 18.

nine years of age, and it was far in advance of anything that had yet been accomplished.

Meanwhile the number of inscriptions available for study continued to increase. In 1837, Grotefend published four lines of an inscription from the collection of Lord Aberdeen and Sir Gore Ouseley, which had recently been presented to the British Museum by Mountstuart Elphinstone. With the assistance of Lassen's alphabet he deciphered the name of the king to whom it belonged. It read 'Artks't'â,' which he easily identified with Artaxerxes.[1] The last line contained what appeared to be a new letter (𐎅), which he thought had the value of *v*.

Two years later (1839) the inscriptions copied by Mr. Rich so far back as 1821 at last saw the light.[2] Several of them were already known by the copies made by Le Bruyn and Niebuhr; but the plates were found to contain the complete text of the Inscription of Artaxerxes, of which Grotefend's formed the four concluding lines (Pl. 23, Inscr. P). It was taken from the north wall of the palace, now identified as that of Ochus, facing the Palace of Darius. He also was the first to copy the Inscription of Xerxes from the anta of his palace (Pl. 16, Inscr. E). The same inscriptions are frequently repeated, and it was an advantage to have copies of more than one version. Thus Rich gave the celebrated four-line Inscription of Xerxes, copied from the east portal of the palace, which was already so well known from Niebuhr's copy, taken from the north (Inscr. G, Pl. 18). Rich has also given two versions of the Inscription of Darius—one taken from the anta of the palace and already known from Le Bruyn (131) (Inscr. C^a), the other from the south stairs, which he was

[1] *Beiträge*, p. 16.

[2] Rich, *Babylon and Persepolis*, 1839. See above p. 99.

himself the first to disinter from the rubbish by which it was hidden (Pl. 20, C^b).[1]

Of greater importance than any of these were the copies taken by the Danish Sanscrit scholar Westergaard. He was commissioned by the Danish Government to visit Persia for the purpose of collecting inscriptions and other matters of archaeological interest. He went to Persepolis and Naksh-i-Rustam in 1843, and not only did he carefully recopy all the inscriptions already known, but some others that had hitherto been neglected. Among the latter are the inscriptions over the animals on the great Eastern Porch at Persepolis, and the long inscription upon the tomb at Naksh-i-Rustam. The first is indeed to be found in Mr. Rich's collection (Pl. 24, 25, 26); but the copy, as we have seen, was made by his Seyid and was found useless for purposes of study. All previous travellers had recoiled before the difficulties of transcribing the tomb inscription, but these were at length surmounted by Westergaard, and his copy is the greatest prize he secured. It was found to be an inscription of Darius, and it served to identify the rock-hewn sepulchre upon which it is inscribed with the tomb of that king. It contained a more complete enumeration of the provinces than the I inscription, and as it was trilingual, it was hoped that so large a number of proper names would at length afford a clue to the values of the signs in the second and third columns, which had as yet remained unknown. Westergaard was the first of the travellers who possessed a competent knowledge of the cuneiform character, before he undertook the difficult task of transcribing them; and consequently his copies

[1] These inscriptions were reviewed by Lassen in the *Zeitschrift* (1840, iii. 442) when he attempted the translation of the Artaxerxes Inscription.

are of exceptional value and accuracy. On his return to Bonn he gave Lassen his copies of the first or Persian column; and reserved to himself the study of the second or Susian column. In the following year (1844) the two scholars published the results of their labours in the 'Zeitschrift,' and their Memoirs afterwards appeared together in a separate volume under the title 'Ueber die Keilinschriften der Ersten und Zweiten Gattung, von Chr. Lassen und N. L. Westergaard' (Bonn, 1845).

Six years had now elapsed since Lassen published his first Memoir. During the interval Beer and Jacquet had made their contributions to the general knowledge; and although Major Rawlinson had not yet published his Memoir on the Behistun inscription, he had been in correspondence with Lassen since 1838, and had already corrected two letters. It is interesting therefore to inquire how far Lassen profited by these investigations. We have seen that he had nine incorrect values in 1836 for the letters in Niebuhr's list.[1] These were:

16  *i*
19  *k*
25  with *u*=*ô*
26  (*z*)
27  *h*
28  *n*
32  *g*
33  *g*
40  *s*

By 1844 he corrected the four following:

(1) 25 into *q*, an approximate value for *k*.
(2) 26 into *θ*, following Jacquet *th*.
(3) 27 into *j* for *y*, following Beer and Jacquet.
(4) 40 into *r*, following Jacquet.[2]

[1] See above, p. 226.

[2] So late as 1839, he could not bring himself to give up 'Ochus' in the Murgab inscription, although he felt greatly shaken by the arguments of Jacquet in support of 'Kurus.' He ended by leaving 25 ( ) unaltered,

He also accepted the corrected value of 41 (𐎠𐎢𐎠) as the aspirate *h*, following Jacquet and Beer; but this value we have already allowed to Grotefend's *a* for *ha*, as approximately correct. One other letter, 22 (𐎵𐎵𐎫) *t*, which he made correct in 1836, he now changes into *d'h*. Thus, in 1844, he still had six wrong values; of these one had been correctly fixed by himself in 1836, 22 (𐎵𐎵𐎫) *t*; another, 16 (𐎚𐎫) *ch*, recently by Jacquet, and two by Rawlinson, 32 (𐎫𐎠𐎡) *j*, and 33 (𐎡𐎠𐎫) *m* before *u*.

There thus remained only two letters not yet provided with correct values: viz. 19 (𐎡𐎵𐎵), which was fixed by Holtzmann in 1845 as *d* before *i*,[1] and 28 (𐎫𐎵𐎠), fixed simultaneously by Hincks and Rawlinson in 1846 as *j* before *a*.

In addition to the thirty-three signs in Niebuhr's alphabet that gained final recognition, two others have since been added. One of them was first found at Behistun by Rawlinson, 43 (𐎠𐎠𐎢) *n*, and does not appear in Lassen. The other, 44 (𐎠𐎡𐎫), was admitted in 1836 by both Burnouf and Lassen as *gh* and *g*, and is finally accepted as *g* before *u* (Spiegel). But in the Memoir of 1836, Lassen farther sanctioned two other signs, (𐎫𐎚) *t*, and (𐎠𐎚) *u*, which he now rightly omits as defective signs for 24 (𐎢𐎵𐎵) *t* and 36 (𐎠𐎚) *u*.

His new alphabet shows also a great improvement in other respects. In deference to the decisive opinions of both Beer and Jacquet, Lassen has given up his double signs for the long and short vowels. He indeed admits that his *a* (𐎠𐎢𐎠) is in fact *h*; his *î* (𐎚𐎫) is *k*, and his *û* (𐎠𐎚) is defective.[2] His diphthongs (𐎵𐎠𐎫 . 𐎚) *ê* and

but changed 40 (𐎫𐎠𐎠) from *s* into *gh* (*Zeitschrift*, ii. 169-71). His acceptance of the correct value, *r*, appears in 1844; and the approximate value of *q* for 25 (𐎠𐎵) *k*, making 'Qurus' for 'Kurus.'

[1] *Beiträge zur Erklärung &c.* (Karlsruhe, 1845), ap. Spiegel, p. 142.

[2] *Zeitschrift für die Kunde &c.* ii. 172.

(𐎭 . 𐎬) *ô*, likewise disappear ; and, what is even of more consequence, his disastrous (𐎬 . 𐎪) for *q* is quietly suffered to drop. Strange to say, the unlucky conjunction of these two letters *u* and *w* with *q* excited the unbounded admiration of Jacquet, who regarded it as the most brilliant inspiration of its author.[1]

To compensate for these omissions, Lassen added a sign (𐎹) which with 44 (𐎼), in addition to the thirty-three signs in Niebuhr's list, made up the thirty-five letters which constitute his alphabet.[2] This sign (𐎹) is always found in conjunction with 31 (𐎻) *n*. Grotefend pointed out long ago that the two signs 𐎻 . 𐎹 replace the word for 'king' and, whatever might be their pronunciation, there was no doubt as to their signification.[3] It was at first supposed that the last letter was an alternative sign for 27 (𐎹𐎪) ; but this had to be abandoned, and Lassen now gives it the value of *rp*, and he reads the combined letters 'narap.' He was led to this result because Westergaard thought that the word corresponding to it in the second column had the sound of 'narap.'[4] The two signs are now treated as together forming a monogram for 'king,' and in transliteration they are represented by *khs* to indicate an abbreviated form of the royal title. He adds also the two new signs that occur in the Inscription of Artaxerxes. The one (𐏓) first appeared in the copy published by Grotefend in 1837 ; the other (𐏔) is dimly discernible in Rich (Pl. 23, line 10), and is no doubt more clearly delineated by Westergaard. The first had evidently the sound of *dah*, for it precedes the *j* in the well-known word 'dahjunam' ; the other clearly denotes the complex sound 'bumi' in the word 'bumi-ja.'[5]

[1] *Journal Asiatique*, vi. 416. [2] Lassen, Second Memoir, p. 5.
[3] See Alphabet in Burnouf. [4] Second Memoir, p. 76.
[5] *Ib.* p. 166. This was not discovered when Lassen wrote in 1839. He then thought the new letter had the value of *x* (*Zeitschrift*, ii. 175).

The long line of scholars from Münter to Jacquet, whose labours we have now passed in review, had at length succeeded in deciphering the cuneiform alphabet of the first species of writing found at Persepolis, and, with the exception of two, they had attached correct values to each of the thirty-five letters. When, therefore, Lassen wrote his second Memoir, the task he had to perform was concerned much less with the alphabet than with the numerous strange words formed by it, which it was now necessary to assign a meaning to and connect together by grammatical rules. It is clear there was only one method to pursue, and that was to compare them with the words and forms of other languages with which the Old Persian was likely to be connected. It was natural in the first instance to turn to Zend, the sacred language of the country in which the inscriptions were found; and the most superficial comparison, which was all that was then possible, was sufficient to prove that the two languages were closely allied. The early scholars were, however, greatly impeded by the extremely imperfect knowledge of Zend that as yet prevailed; and even if the cuneiform alphabet had been completely deciphered by Grotefend, it may be doubted whether the means were then available to grapple successfully with the difficulties of translation.[1] At that time Zend was known only by the work of Duperron, which, however remarkable for the time at which it appeared, was quite inadequate for the purpose. Indeed some scholars, even long afterwards, had doubts as to the genuineness of the language itself. Since then,

[1] Lassen, First Memoir, p. 14. In 1852 we are told that English scholars were still disposed to distrust 'the authenticity of the Zendavesta as translated by Anquetil,' and it is curious to learn that the Achaemenian inscriptions were appealed to, to prove 'that there was in use in Persia in the time of Darius a language very much the same as Zend.' *J. R. A. S.* xiii. (1852) 200.

however, the edition of the Yaçna published by Burnouf in 1833 placed the study upon an entirely different footing; and the progress made by Bopp and many others in Sanscrit was also of material service. It thus happened that concurrently with the improvement of the cuneiform alphabet the chief obstacles to the translation of the language were removed. When Burnouf and Lassen wrote their Memoirs in 1836, little progress had been made in that direction beyond the identification of the names of the Achaemenian kings, and of a few simple words. The attempt to go beyond rested chiefly upon conjecture and frequently resulted in absurdities of which the constellation of Moro is the typical instance.[1]

Progress was at first considerably retarded by a misapprehension of the relation between the Old Persian of the inscriptions and the language of the Zend-Avesta. Grotefend for a long time thought the two were absolutely identical, an opinion which, however, he subsequently modified.[2] Both Burnouf and Lassen, especially the latter, were at first inclined to suppose too close a resemblance between them. We have already pointed out some of the errors that resulted, especially with regard to the long and short vowels and the diphthongs. But this error was speedily corrected, and Lassen afterwards showed that the relation they bore to each other was that of descent from a common parent; and although Old Persian is historically more modern, it continued to retain some of the primitive forms which Zend had changed. While he recognised that they were two distinct dialects, he admitted that they closely resembled each other, and hence the great assistance he derived from the Zend in the interpretation

[1] Lassen, First Memoir, p. 3.
[2] *Ib.* p. 11. Cf. *Beiträge* (1837), p. 24.

of the inscriptions.[1] After Zend, he found that Sanscrit afforded him the greatest help. Indeed he was surprised to observe how often it agreed with the Old Persian, and it was particularly useful with respect to the grammatical forms.[2]

It is the natural affectation of the minute scholar to exaggerate the importance of an accurate knowledge of grammatical construction, and to disparage or ridicule even great results that may have been attained in defiance of strict rule. It became the fashion to underrate the very considerable achievements of Lassen as a translator, because it was afterwards found that he fell into several errors which later knowledge has cleared away. Major Rawlinson was unfortunately peculiarly liable to depreciate the work of his competitors, and it is therefore with no surprise that we find him dwell with more emphasis upon their failures than upon their success. But it is certainly remarkable that Hincks, the Irish cuneiform scholar, should have been betrayed into a judgment that must now be regarded as singularly unfair and censorious. Writing in 1847, he gave expression to the opinion that 'Lassen seems to have been completely destitute of the peculiar talent of a decipherer, and his attempts at translation were consequently as bad as could be made . . . the number and grossness of many of his mistakes are such as to create astonishment.'[3] It is quite true that Lassen sometimes mistook verbs for adjectives, and that in some places he had to warn the reader that his translation was purely conjectural. But his services should be estimated by the state of knowledge at the time he

[1] Lassen, Second Memoir, p. 253. Burnouf seemed to think that the Old Persian descended directly from the Zend. Jacquet, *Journal Asiatique*, v. 371.

[2] Lassen, Second Memoir, p. 6.

[3] *Dublin University Magazine*, Jan. 1847, p. 21.

wrote. It must be remembered that when he began these studies, in 1836, all that was known were a few proper names, and every attempt to pass beyond had hitherto led to ridiculous misrepresentations of the true meaning of the texts. When, in 1844, he completed his translation of the whole series of inscriptions of the Persian column—with the exception of the Behistun, which was not accessible to him—he had succeeded in making their contents as well known as they are at present in all the essential points of their subject-matter. It must be recollected also that he had to contend with difficulties that have since been in great measure removed. The texts upon which he worked were in many places in need of emendation; and the parallel columns in Susian and Babylonian, which have afforded so much assistance to later translators, were then completely unknown. Moreover, it should not be forgotten that, notwithstanding all the advantages that are now at command, many of the passages over which Lassen stumbled are still the subject of dispute.

His collection included the ten independent inscriptions at Persepolis; the Tomb inscription at Naksh-i-Rustam, so lately recovered by Westergaard; the Cyrus inscription from Murgab; the inscriptions of Elvend and Van that only a few years before had acquired an entire volume to expound. He added a translation of the short inscription on the crystal cylinder brought from Egypt and now in the British Museum. He reads: 'Ego Darius hominum tutor.' He also translated the Denon inscription, found in 1800 near Suez, which, according to him, signifies 'Darius hominum tutor magnus.' Both these inscriptions write 'King' with the abbreviation to which Lassen assigned the value of 'narpa' and translates 'hominum tutor.' The true meaning of the first is 'I [am] Darius the King,'

and of the second 'Darius the great King.'[1] The same abbreviation occurs in the inscription on the Caylus vase, but in this case Lassen translates it simply as 'rex' —'Xerxes rex magnus.'[2]

Although Lassen may justly claim great praise for the skill he has displayed in his translations, it must not be supposed that he succeeded in overcoming all the difficulties that stood in his way. His task was greatly simplified by the constant recurrence of a set form of words with which the inscriptions usually begin.[3] At Persepolis this form is first met with on the Porch, and it occurs altogether five times in the ten Persepolitan inscriptions. The two Hamadan inscriptions consist of nothing else. A shorter form, which begins at the second paragraph of the one just mentioned, is repeated three times at Persepolis. The longer form sometimes reaches over twenty lines, and as the whole series of these inscriptions only amount to three hundred lines, it is evident how considerably the task of the translator was reduced. Most of the inscriptions are, as we have seen, repeated in several places: the window inscription in the Palace of Darius no less than eighteen times. But the very limitation thus imposed upon him was one of the chief obstacles to his progress. Indeed, until the Behistun inscription became available it was impossible to acquire any extensive knowledge of the language. To this circumstance must be partly ascribed the inferiority of Lassen's rendering of difficult passages, when compared with the facility we observe in Rawlinson from the first.

Between the publication of the First Memoir and the one we are now considering, Lassen made considerable progress. In the I inscription the names of the

[1] Rawlinson in *J. R. A. S.* x. 313. [2] Second Memoir, pp. 80, 145.
[3] See above, p. 7.

twenty-five provinces are now given correctly with the exception of two: 'Gordyaei,' which Rawlinson had shown should read 'M'udraya,' Egypt; and 'Parutia,' which is not a proper name at all, but means 'east.' Neither Lassen nor Rawlinson had much success in their treatment of the new names of provinces found at Naksh-i-Rustam, and no general agreement has even yet been reached with regard to some of them. A careful collation of the difficult passages in the subject-matter of the inscriptions is, however, sufficient to prove the great superiority of Rawlinson over Lassen, both in the actual work of translation and in the necessary emendation of a disputed text. An instance of the comparative ingenuity of the two scholars is afforded by a passage in the Naksh-i-Rustam inscription, where the last letter of the thirteenth line is obliterated and the passage runs thus (Lassen's transliteration):

line 13 ?
„ 14 Arçahjâ puthra ârija ârija d —
„ 15 thra

The omission of the letter led Lassen into one of the greatest blunders in his revised translation. His 'progenies Arçis' commits him to a definite historical error, while the rendering of the following words 'ârija ârija' is merely an instance of aberration to which the greatest scholars are occasionally subject. Rawlinson, who greatly excelled him in 'intuition,' had no difficulty in supplying the missing letter as *p*, and he translated the passage correctly: 'son of a Persian, an Arian, of Arian descent,' in the place of 'Progenies Arcis, a venerabilibus stirpis auctoribus oriundi'! Lassen's knowledge now enabled him to point out several instances in the Inscription of Artaxerxes Ochus

that served to illustrate the decay of the language, though the interval from the classical age of Darius was not more than a hundred and ninety years. It is here that the two new signs—or rather contractions—for the syllables 'dah' and 'bumi' first occur. Of more interest is the evidence this inscription affords of the degeneration of the Persian religion by the admittance of Mithra into its worship. Artaxerxes the Third traces his genealogy through Artaxerxes the Second (Mnemon), Darius the Second (Nothus), Artaxerxes the First (Longimanus), Xerxes, Darius the First, and Hystaspes, to Arsames the Achaemenian; and neither of the two last are distinguished by the royal title.

The most important publication after Lassen's essay in 1844 was a criticism that appeared upon it by Adolf Holtzmann in the following year.[1] It was written with much personal animosity to Lassen, and this enlivens in an amusing fashion the extreme aridity of the subject-matter.

Only two letters now remained to be correctly determined: 19 (), the *k'h* of Lassen, and this Holtzmann successfully accomplished. The letter occurs in the words Lassen transliterated 'jak'hija' and 'hak'hi(s).'[2] Holtzmann substituted *d* and read the first word 'jadij,' which he compared with the Sanscrit 'jadi,' Zend 'jedhi'—'when'—instead of Lassen's 'venerandus,' a meaning that turned out to be correct.[3] Finally, he reviewed all the words in which the letter occurs, and he found that the substitution of *d* for *k* enabled him to assign satisfactory meanings to the whole of them.[4]

[1] Holtzmann, *Beiträge zur Erklärung*, Carlsruhe, 1845.

[2] I Inscription, line 19 (Second Memoir, p. 176); E^b Inscription, line 24 (*ib.* p. 173).

[3] Second Memoir, pp. 65, 68; Holtzmann, p. 62.

[4] Holtzmann, p. 78.

Holtzmann is also credited[1] with having slightly improved the value of 28 (𐎶), the *z* of Jacquet, by giving it the sound of *g*—presumably *g* soft, but as it always precedes *a* the reader would naturally assume it to be hard, as in 'gadija,' 'aga'mija,' etc. It is in fact *j* before *a*.

Holtzmann has the merit also of rectifying several of Lassen's verbal errors. For example, he showed that 'hadâ,' which Lassen thought signified 'continually,' in reality means 'with.'[2] Of more importance was his treatment of the word then read 'Paru-ja' ('parauvaiy'). Rawlinson had already annihilated two of Lassen's provinces—Uscangha (the Uxii) and Drangha (the Drangii)[3]—and Holtzmann now disposes of the third—Paru-ja—which Lassen still cherished in 1845. Lassen derived the word from the Sanscrit 'parvata,' 'hill,' and thought it was a mountain district called Parutia, near the Persian frontier. Holtzmann had recourse to the Sanscrit 'purva' (easterly), and translated the sentence 'the land of the east,' meaning the eastern provinces whose names followed.[4] When Holtzmann attempted the correction of longer sentences he was not always so successful. For example, he rendered the words that were then transliterated 'jak'hija âwamâ (ma)nijâhja hak'â ânijanâ mâ rçam imam Pârçam,' 'When one goes — from Anijana to the ocean, this land they call Persia'!—the real meaning being 'Wenn Du so denkst vor Niemanden möchte ich zittern—so schütze dieses Persische Heer.'[5] Another instance of ingenuity is the rendering of the line 'hak'â

[1] By Spiegel, p. 142, who erroneously says he valued it as *j*.

[2] Lassen, Second Memoir, p. 28; Holtzmann, p. 74.

[3] First Memoir, p. 152; Second Memoir, p. 52.

[4] Lassen, Second Memoir, pp. 53, 64; Holtzmann, p. 120.

[5] I Inscription, lines 20–4; Second Memoir, p. 176; Holtzmann, p. 63; Spiegel, p. 51.

ânijanâ nija t^{a}rç^{a}tija,' 'ab Anjana usque ad Tarsatia' (*sic*). It will enable the reader to see how uncertain was the progress yet made when these same words were rendered by Lassen, in 1844, 'adoratio consecrata contingit,' and by Rawlinson, in 1846, 'From the enemy feareth not'—which closely approached the true translation: 'fürchtet sich . . . vor keinem Anderen.'[1]

Sometimes, however, Holtzmann showed a marked improvement upon Lassen. Thus the latter scholar translated the fiftieth line of the Naksh-i-Rustam inscription 'Auramuzdi adorationem attulere, quae [regiones] illae palatium exstruxere.' Holtzmann substitutes 'Auromazdas enim opem tulit dum opus feci,' and Rawlinson, in 1846, correctly renders the sentence 'Aurmazd brought help to me so that I accomplished the work.'[2]

When Rawlinson was writing his Memoir in 1846 he remarked upon the singular fact that no Englishman except himself had yet taken part in the work of decipherment. Many had indeed occupied themselves in the more adventurous task of collecting the materials —among whom were Morier, Ouseley, Ker Porter, and Rich—but so far Rawlinson was alone among his countrymen as a decipherer. This special study arose first in northern Europe, and it is remarkable how large a share was borne by Denmark. Niebuhr, upon whose foundation all later scholars built, was born at Ludwigsworth in North Hanover; but he served under the king of Denmark, and his Travels were first published at Copenhagen. Münter, though a German by

[1] Inscription H, line 11; Second Memoir, p. 27; Holtzmann, p. 65; Rawlinson, *J. R.A. S.* x. 274; Spiegel, p. 49.

[2] Holtzmann, p. 117; Second Memoir, p. 116; Rawlinson, *J. R. A. S.* x. 308.

descent and birth, was brought up at Copenhagen, and passed his whole life in Denmark, where he died as Bishop of Seeland. Rask was a Dane, and he laboured throughout his life as a Professor at the University of Copenhagen. Westergaard belonged to the same nationality and, as in the case of Niebuhr, his journey to the East was due to the liberality of the Danish Government. Lassen was born and educated at Bergen, though, it is true, he left Norway at the age of twenty-two and passed the greater portion of his life at Bonn Tychsen was also of Norwegian descent, but born at Tondern, in Schleswig. Grotefend was a Hanoverian, born at Münden. Beer, on the other hand, was an Austrian from Bötzen. France was as yet represented only by two scholars, St. Martin and Burnouf; Belgium by one, Jacquet; and England also by one, Rawlinson. But the latter was soon joined by two others, Hincks and Norris, both of whom, especially the former, were soon to acquire a brilliant reputation in cuneiform studies. The Rev. Edward Hincks belonged to a Chester family settled in Ireland since 1767. His father was a Presbyterian minister who for a time kept a school at Cork, and afterwards became classical master at the Belfast Academy (1821–36). He was a man of the most varied learning, who lectured with equal success on two such different subjects as Chemistry and Hebrew. He wrote a Greek Grammar, and was a frequent contributor to the proceedings of the Royal Irish Academy. He married a Chester lady, by whom he had a numerous family, many of whose members rose to distinction. One son became Archdeacon of Connor, another Professor of Natural Science at Toronto, a third was well known in Canadian politics. He became Premier in 1851, and was called the 'Colbert of Canada.' He was afterwards appointed

to a Colonial Governorship, and was made a K.C.B. in 1862. His brother Edward, the cuneiform scholar, was born in 1792, and after a distinguished career at the University of Dublin, he settled down in a remote country parish as Rector of Killyleagh in the county Down. In that inhospitable region he spent forty-one years, till his death in 1866. He first attracted attention by his papers on Egyptian hieroglyphics, contributed to the Irish Academy. His contributions to cuneiform literature began in June 1846, when he read a paper 'On the First and Second Kinds of Persepolitan Writing.'[1] This was followed by another in November 'On the Three Kinds of Persepolitan Writing and on the Babylonian Lapidary Character.' In January of the following year a farther essay appeared, 'On the Third Persepolitan,' and in the December after he published a long paper in the 'Journal of the Royal Asiatic Society' on the Inscriptions of Van.[2]

When he entered upon the study of the first column but little remained to be done to complete the decipherment of the Persian alphabet. His attention was therefore chiefly directed to the writing in the Susian and Babylonian columns. In a postscript to his first essay he insisted on the substantial resemblance of the language of the third column to those of the Babylonian and Assyrian inscriptions. He supported the opinion which had been even then suggested, that both of these 'have much in common with the Semitic languages' and he announced that he had read the names of Babylon and Nineveh on the bricks.[3] He devoted his ingenuity in the first instance to prove the identity of the cursive mode of writing found in the third column and in some

[1] *Transactions of the Royal Irish Academy* (1848), vol. xxi. pt. ii.
[2] *J. R. A. S.* ix. 387.
[3] *Trans. R. I. Acad.* loc. cit. p. 131.

Babylonian inscriptions with the character seen on Babylonian bricks and in the East India House Inscription. He published two elaborate tables in illustration of this theme, and offered a few suggestions as to the meaning of the signs.[1] His later contributions deal chiefly with the Assyrian inscriptions, which, since the excavations made by Botta, began to attract the largest share of public attention. In 1850, he wrote on Khorsabad, on the Assyrio-Babylonian phonetic system, and on Assyrian mythology. Among his more important contributions to Assyriology are his treatise on the Assyrian Verb (1855–6) and his Assyrian Grammar, begun in 1866.[2] The last was left unfinished, and, strange to say, no notes were found among his papers to assist in its completion. Like Jacquet, he seems to have charged his memory with the whole burden of the complicated task he had set himself to accomplish. Few scholars enjoyed a higher reputation for extraordinary acumen in unravelling the difficulties of this intricate subject. The 'intuition' he displayed was specially remarkable, and often led him to anticipate conclusions that other scholars only reached by a slow and arduous course of inquiry. Even Rawlinson, who shared to a high degree in this rare gift, often found himself anticipated by the Irish scholar. Hincks, for example, was the first to decipher the name and titles of Nebuchadnezzar in the India House Inscription and in many other places, where Grotefend thought he had found 'forms of prayer.'[3] This was, however, after he had received the Behistun Inscription, where 'Nebuchadnezzar' was found by Rawlinson in the Persian column.[4]

[1] *Trans. R. I. Acad.* loc. cit. pp. 242, 244, 253.

[2] In *Journal of Sacred Literature*, 1855; *J. R. A. S.* (1866), vol. ii.

[3] *Trans. R. I. Acad.* loc. cit. p. 243.

[4] *Ib.* p. 233; *J. R. A. S.* x. lxx.

Hincks's paper 'On the First and Second Kinds of Persepolitan Writing' was read to the Royal Irish Academy on June 9, 1846, and he communicated its contents to Mr. Norris, the secretary of the Royal Asiatic Society, who sent a detailed account of it to Major Rawlinson at Bagdad. This letter was despatched from London on August 20, and five days afterwards, on the twenty-fifth of the same month,[1] Major Rawlinson sent off a Supplementary Note in which, by a very singular coincidence, he introduced some important modifications in his system of transliteration that brought it into substantial agreement with that just then proposed by Hincks. Thus the two documents crossed each other on the way, a circumstance that affords conclusive proof of their independent production.[2] But as Hincks's paper was read in June and Rawlinson's note not despatched till August, the priority must be awarded to the former. This was the first occasion on which Hincks had contributed to cuneiform research, and, as we have said, he had the good fortune to forestall Rawlinson in one of his most useful discoveries. When he wrote, Lassen's Second Memoir of 1844 was still the chief authority on the subject, and it is to it that he directs his criticism. In looking over Lassen's alphabet, nothing was more remarkable than the number of signs allotted to certain supposed modifications of the same sound. Thus *k*, for example, was represented by no less than four different signs expressing *k* (No. 4), *k*' (16), *k'h* (19), and *kh* (42): *d* by three different signs, *d* (11), *d'h* (22), and *dh* (34). At the same time it was

[1] *Athenæum*, December 19, 1846.

[2] It took forty-four days to communicate between Bagdad and London. If, therefore, Hincks's paper had been forwarded earlier, say on June 12, it would have been in Major Rawlinson's hands on July 26; but we have positive assurance on Mr. Norris's authority that this was not the case. See the *Athenæum*, loc. cit.

beginning to be remarked that certain of these signs to which modifications of the same sound were ascribed were only to be found in combination with particular vowels. Lassen himself had pointed out in his First Memoir of 1836 that *m* (29) always preceded an *i*. Jacquet added that *r* (40) always occurred before *u*. Holtzmann also remarked that 28 (), to which he gave the value of *g*, is always followed by *a*, and 19 *d* by *i*.[1]

The merit of Hincks consists in this: that he was the first to point out that the various signs allotted to the same letter did not differ from each other by any modification of sound as Lassen supposed, and also that their employment was regulated according to the vowel that succeeded them. He accordingly divided the signs for these consonants into two classes, according as they were followed by *a*, inherent or expressed, and by *i* or *u*; and he added *r*: the former he called primary, and the latter secondary, consonants. Lassen, as we have said, was of opinion that the secondary letters must have a somewhat different value, and in particular that they were all aspirated. He also thought they might be used indifferently before any vowel. Thus, for example, he supposed that the two signs for *m* ( and) might both be used before *i*, and that they expressed a slightly different sound. Hincks, on the contrary, maintained that could never really open upon *i*; and when it appears to do so, as in the group , *a* is always understood. Thus is 'mi,' but is 'mai' or 'mê,' the secondary form of *m* being equivalent to its primary form; and he ascribed the existence in the alphabet of this peculiarity to a survival from a

[1] See above, pp. 229, 244; Holtzmann, pp. 60, 78.

syllabic mode of writing. Its utility is, however, obvious, for with only three vowels—*a*, *i* and *u*—it would otherwise be impossible to render the sounds *ê* and *ô* (*ai*—*au*). As, however, the consonants themselves were of the same value, Hincks writes them with the same sign, and discards the *h* which had till then been added to mark an imaginary difference in the sound of the secondary consonants. This is precisely what Rawlinson did in his Supplementary Note, and for the same reason. Hincks lays down the general rule that when a primary consonant replaces a secondary consonant before *i* or *u* 'an *a* must be interposed either as a distinct syllable or as a guṇa to the vowel.'[1] This alteration led to a considerable modification in the method of transliteration, but its importance arose from the altered translation of which the words became susceptible. Thus, in the instance already given, 'miy' is the termination of the first person singular present tense of the verb; while 'mey' (properly 'maiy') is the enclitic pronoun used for *my*. So also the words Lassen transliterates 'utamija khsathram' and renders 'tum hoc regnum,' when properly transliterated 'utamê' ('utamaiy') signify 'meumque regnum.'[2]

Hincks had also the merit of calling attention to the indiscriminate addition of *a* by Lassen to words ending in *iy* and *uw*. This lengthening of the syllable sometimes entirely obscured the sense—as in 'thatija,' which Lassen supposed to signify 'generosus,' and which is in fact the verb 'he says.'[3]

When we compare Hincks's alphabet with Lassen's (passing over the mere omission of the aspirates) we

[1] *Trans. R. I. Acad.* loc. cit. pp. 117–18.

[2] *Ib.* p. 124; *cf.* Spiegel, E Inscription, line 18, p. 60.

[3] *Trans. R. I. Acad.* loc. cit. p. 116. For Hincks's Alphabet see *Trans. R. I. Acad.* loc. cit. p. 131 and App. A.

find that Hincks had only four incorrect values, as opposed to the six of Lassen. These were:

26 *z* for *th*;
32 *zh*(*i*) for *j*(*i*);
33 *kh*(*u*) for *m*(*u*);
39 *p*(*r*) for *f*(*a*).

Two of these were already correctly given by Lassen (Nos. 26 and 39). On the other hand, Hincks corrected three out of Lassen's six wrong values:

16 *ch* instead of Lassen's *k'*;
19 *d*(*i*) instead of Lassen's *k'h* (due to Holtzmann);
28 *j* instead of Lassen's *z'*.

It may be observed also that Hincks has correctly indicated all of what he termed the secondary consonants and distinguished between those followed by *i* and those followed by *u*. The others not so distinguished are the primary consonants preceding *a* inherent or expressed.

When Hincks read his paper in June, Rawlinson's Memoir on the Behistun Inscription had been already received by the Asiatic Society and was in the printer's hands. It was no easy task at that time to carry it through the press. Cuneiform type had to be cast, and the expense and trouble it caused were very great. The work was, however, looked forward to with the greatest interest. After the appearance of Professor Lassen's essay, in 1844, all the cuneiform inscriptions of the Persian column then known had, as we have said, with one notable exception, been translated. There remained the great inscription at Behistun, which it was known Major Rawlinson had copied and was at work upon. We have already narrated the succession of untoward circumstances that had delayed its publication

for seven years, from the time when two hundred lines had been prepared for the press in 1839 down to the late autumn of 1846, when the completed work was first made public. Meanwhile no other traveller appeared at all disposed to anticipate him. There were indeed few who cared to undergo the personal risk Rawlinson had so cheerfully faced, nor willing to expend a thousand pounds upon the dangerous task, as he had so generously done. Indeed down to 1884 only one other traveller subsequently accomplished the ascent.[1] In February 1846, Rawlinson forwarded a complete translation of the entire text to the Royal Asiatic Society The remainder, with the cuneiform original and notes, followed at intervals in the course of the year. The editorial note, dated September 7, tells us that the text and the first five chapters of the Memoir had been already received. The work appeared in four parts, of which the first three form the tenth volume of the Society's Journal. The first was published in 1846, and contained eight plates, two representing the rock of Behistun and the figures sculptured upon it, executed by Lieutenant Jones of the Indian Navy;[2] the others are devoted to the five columns and appendices which form the text. Then follow the transliteration and two translations, one in Latin and the other in English, with notes on the state of the text. This was followed by the first two chapters of his 'Memoir on the Inscription' to page 53. This portion of the work was reviewed by Hincks, in the January number of the 'Dublin University Magazine,' 1847, and by Benfey in a pamphlet published at Leipzig in January 1847. Part II. was published before the meeting of the Society in

[1] *Athenæum*, Nov. 8, 1884.

[2] *J. R. A. S.* x. 16. Hincks received Part I. in time for his papers, read on Nov. 30 and Dec. 14, 1846. *Trans. R. I. Acad.* vol. xxi. part ii. p. 233.

May 1847, and included the third chapter of the Memoir, treating of the cuneiform alphabet and the important Supplementary Note on the pronunciation, pages 55 to 186.[1]

Part III. was at the same time in the hands of the printer, and appeared later in the year (1847). It contains Chapters IV. and V. of the Memoir. The former gives a revised transliteration and translation of the text with an Analysis; and the other a complete revised edition of all the inscriptions previously published by Lassen. Mr. Norris, the Assistant Secretary of the Asiatic Society, saw the whole of this complicated work through the press, and he undertook to alter the transliteration given in Chapter IV. in accordance with the principles laid down in the Supplementary Note. For his services in this matter, he received a vote of thanks from the Society. 'He unites,' said the proposer, 'more varied learning and more rare and extensive research and intelligence than I have ever seen combined in the same individual';[2] and he subsequently attained an independent position in the first rank of cuneiform scholars.

Part IV. was not published till 1849. It included the sixth chapter of the Memoir and treated of the Vocabulary, but the dissertation was never completed. It breaks off in the middle of a sentence, when the writer had not proceeded further than the words commencing with vowels and with consonants of the first three classes. It purports to give a few brief etymological explanations, but in reality it is admirable as a display of learning in many fields of knowledge, and it is especially interesting for the explanation it affords of the reasons that led to the determination of words of doubtful meaning. While he was engaged in this work,

[1] Report, June 1847, *J. R. A. S.* x. p. vii.

[2] *Ib.* p. xvi.

he received Lassen's Second Memoir. It did not reach him till August 1845, when his own translations were completed and already beyond the reach of alteration. He had little cause, however, to regret the delay that arose from the difficulty in those times of 'communicating between Bonn and Bagdad,' for he could have derived small benefit from the very inferior translations of his predecessor. In the philological branch of the subject, however, he found the Memoir 'of the greatest convenience as a manual of reference,' and his marginal notes show how carefully he consulted it.[1]

By the publication of this work Major Rawlinson at length took his place among the cuneiform scholars of Europe. We have shown that the study was by that time far advanced, and most of the difficulties of the Persian column were already surmounted. Rawlinson did not, therefore, put forward any pretension to original discovery in that department, but was, he said, 'content to rest my present claims on the novelty and interest of my translations.'[2] He hoped eventually to earn the higher distinction of an original discoverer, 'according to the success that may attend my efforts to decipher the Median [Susian] and Babylonian inscriptions.' It was not, however, without an effort that he presented himself in so modest a garb upon this occasion. He was convinced that he had made each step in the tedious process of decipherment by his own unaided effort; and in whatever light he might appear to the public, he was certainly an original discoverer to himself. He had no doubt that if Grotefend and Lassen had never lived the world would have been indebted wholly to him for the discovery, and, although we think he may have been influenced more than he suspected by other scholars, there is no great improbability in supposing

[1] *J. R. A. S.* x. 18. [2] *Ib.* x. 2.

that his own ingenuity would have been quite equal to grapple singly with the task.

Notwithstanding his avowed disclaimer, he still cherished the opinion that he had really made some important contributions to the determination of the alphabet. On one occasion indeed he went so far as to claim the paternity, directly or indirectly, of at least ten characters, and he referred to his correspondence with Burnouf and Lassen as the medium through which he had made his influence felt. It is clear, however, that in this he was entirely mistaken. According his own admission, he knew as little of the Continental scholars as they did of him until his first communication to the Asiatic Society, which was received in March 1838. It will be recollected that Burnouf and Lassen had published their Memoirs two years before; so neither of these could have been influenced by Rawlinson. It only remains to inquire whether he could have suggested any of the six values ascribed to Jacquet, whose essay appeared in the course of 1838. Here a comparison of dates is not sufficient in itself to determine the question. Rawlinson's communication was known in London on March 14, and was submitted to the French Society on April 20. Jacquet began that very month to publish his criticism of Lassen, and his active mind was full of the subject. He was no doubt present at the meeting when Rawlinson's copy of the inscription was submitted to the Society, and there was ample time for him to profit by any suggestions it contained in his future papers on the subject. We have, however, conclusive proof from Rawlinson's own admission that the values of these six letters were not then known to him. Nor could they have been communicated to Jacquet through his subsequent correspondence with Burnouf. Jacquet died in July

1838, and Rawlinson's correspondence with Burnouf and Lassen did not begin till the summer of that year.[1] From that period Rawlinson himself accounts for all the letters in question. Writing after Jacquet's death, he tells us in a letter to Burnouf that he had just found the value of 16 (𒁹) *ch*. Two other values, 26 (𒌋) *th* and 41 (𒄩) *h*, he fixed still later in the winter 1838–9; another, 27 (𒌋) *y*, he acknowledges he received from Lassen.[2] The sign 10 (𒁹) he also fixed in 1838–9; but he gave it the same value as Lassen had done in 1836, viz. *w*. In Germany *w* was no doubt equivalent to its correct value *v*, but scarcely so to an English-speaking man, especially as he distinguishes it from his *v* (𒌋) No. 15. The other letter, 40 (𒁹) *r*, was known correctly to Grotefend in 1837. With reference, therefore, to the six letters attributed to Jacquet, it is seen that none of them were due to the influence of Rawlinson, either through his Memoir or subsequently by correspondence. One letter (*r*) was fixed before Rawlinson was known. Three others were first announced after Jacquet was dead (16, 26, 41). One was wrong (10), and the other (27) he acknowledged to have borrowed from Lassen. It is impossible, therefore, to admit the pretension put forward by Rawlinson, that he could 'fairly claim the paternity, either directly or indirectly, of at least ten characters' on the ground that 'it was impossible to say by whom each individual letter became identified.' On the contrary, the history of the identification is plain enough, and there is no difficulty in assigning the proportion of merit due to each discoverer. It was not till after the essays of Jacquet that Rawlinson bore any

[1] Lassen's first letter to Rawlinson is dated August 19, 1838. See *Memoir* by Canon Rawlinson, p. 316.

[2] *J. R. A. S.* x. 8, 9, 10, *notes*.

share in the general progress of the study; and then not more than four characters remained to be correctly identified.

We have already seen with what conspicuous success Rawlinson had found the true values of two of these, so far back as 1838. One still gave Lassen a great deal of trouble, and he had variously valued it as *k* (1836), *ich* (1839), *k'h* (1844). In his letter to Rawlinson he preferred to leave it undetermined (1839).[1] Rawlinson suggested that it had the sound of *t* before *i*, which is so nearly correct and so great an improvement upon all previous attempts that it might almost be conceded to him as an approximate value if he had announced it earlier. He acknowledges that he remained long in doubt concerning it, and there is no evidence, as in the case of the other two letters, that he suggested the emendation to Burnouf.[2] Before his alphabet appeared, in 1846, the true value had been already fixed by Holtzmann in 1845 as *d* before *i*.

It thus appears that Rawlinson had a real aptitude for unravelling this kind of puzzle. Only four letters were left to him by his predecessors; and of these he determined two correctly and one nearly correctly. The fourth, 28 () the *z* of Jacquet, he improves to an approximate correct value *j'h* in his first alphabet; and in his second he gives it correctly as *j* before *a*: a correction made simultaneously by Hincks. He may also claim the merit of having restored the sound of *k* (he writes *kh*) to 25 (). The value of this letter had long before been fixed by Grotefend, but since then it had passed through many vicissitudes. St. Martin thought it was *h*; Burnouf made it *q*; and Lassen thought, in 1836, it stood for the *a* in the diphthong *au*,

[1] *J. R. A. S.* x. 10, *note*.

[2] See *ib.* p. 8, *note*.

ô, till at length, in 1844, he reluctantly adopted Burnouf's *q*.

In addition to these services, Rawlinson contributed two new letters, one of which, No. 43 (), *n* before *u*, has taken a permanent place in the alphabet. The other (), *ñ*, is really a Susian letter with a nasal sound, and is found in the Persian column in only two proper names. Oppert suggests that it may be the missing *l*; and Spiegel is disposed to agree.[1]

If we consult Rawlinson's alphabet as it stood early in 1846, it will be seen that he was in possession of correct values for the thirty-three signs in Niebuhr's list, with the exception of two, 10 () *w* for *v*, and 19 () *t* for *d*, and both of these may be almost allowed to him as approximately correct. In the case of the first, indeed, we have already conceded it to Lassen, in consequence of the practical exclusion of *w* from the German language; and we have only denied it to Rawlinson because he distinguishes it from his 15 () *v*.

We have not included the addition of the aspirate among the number of errors, where it indicated only an unimportant modification of a correct sound. It had its origin in the difficulty that was found in believing that there could be more than one sign in the alphabet to express precisely the same sound. We have seen that Hincks had just shown that these signs do in fact express the same sound, and that their employment depends solely upon the vowel that follows. After Major Rawlinson's first alphabet was in print, he arrived, independently, as we have already stated, at precisely the same conclusion. He had long been struck with the peculiarity that certain consonants are only to be found followed by a particular vowel, and in his first alphabet he indicated five letters thus distinguished.

[1] Spiegel, p. 154.

These were: 19, *t* with *i*; 29, *m* with *i*; 33, *m* with *u*; 40, *r* with *u*; 43, *n* with *u*; and he observed especially the affinity the vowel *i* had for certain consonants—a peculiarity he noticed also in some of the Scythic languages.[1] When once his attention was directed to these facts it was not long before he set himself to account for them. One of the most useful contributions to decipherment made by Lassen arose from the suggestion that an *a* is understood though not always expressed after a consonant, when not followed by another vowel. Indeed until this idea occurred to him the result of decipherment was the apparition of a long series of words consisting of an agglomeration of consonants which no living tongue could pronounce. The next step to be made, resulted from the observation that some letters were always followed by *i* and others by *u*. A laborious classification of each letter according as it was followed by each of these vowels was therefore undertaken, and the result was sufficiently remarkable. It showed that in two cases in the grade of sonants (*d* and *m*) there was a different sign according as the letter was followed by *a*, *i*, or *u*. Conversely, there were three cases in the grade of aspirates (*th*, *y*, *sh*), where the same sign might be found before any of the three vowels; and finally there were several cases in the grade of surds (*k*, *t*, and *r*), where it was noticed that the same

[1] Rawlinson wrote, early in 1846: 'The cause of the affinity of the vowel *i* for the characters *j*, *t*, *m* and *v* can neither be explained, nor can we perceive any uniform effect which the coalition produces upon the phonetic power of the consonant. I can only illustrate the formation of the different groups by adverting to the law which still prevails in the Tartarian dialects, requiring the juxtaposition of certain vowels with consonants in order to render the latter articulable; and by observing that, as a similar rule appears to hold good in the so-called Median alphabet, which has every indication of a Scythic origin, it is not improbable that the Persian writing may have been indebted to that source for so remarkable a deviation from the true principles of Arian orthography.' *J. R. A. S.* x. 65.

sign was followed by either *a* or *i*, and that a different sign was used before *u*. Taking these facts into consideration, Rawlinson thought he observed sufficient regularity to justify him in formulating the general law that, for some unexplained reason, the grade of surds in each class were expressed by two signs, one used before *a* and *i*, the other before *u*; the grade of aspirates by one sign only, equally available before any of the three vowels; and the grade of sonants by three signs, each applied to one vowel only. He admitted that there were numerous exceptions to the rule; indeed, the class of dentals is the only one where the series is complete, but the exceptions he was inclined to attribute chiefly to the incompleteness of the alphabet.[1]

When the letters of Rawlinson's original alphabet were distributed into the various classes of gutturals, palatals, and so on, and among the subdivisions of surds, aspirates, and sonants, they were found sufficient to suggest the existence of some such law in the cases that have been named. With Holtzmann's correction of 19 (𒁹) from *t* to *d*, he had the three *d's* required to complete his sonants of the dental class. His own list gave him the three *m's* required for the sonants of the nasal class; and he already knew that one was used only before *i*, and the other only before *u*. He knew also that the aspirates of three of the classes were to be found indifferently before any vowel. In the case of the surds, he had found that five of them (*k* 𒆳, *ch* 𒄩, *t* 𒁹, *n* 𒉡, *r* 𒊑) are always to be found before either an *a* or an *i*. He knew also that his second sign for *n* 𒉡 (43) and his second sign for *r* 𒊑 were only to be found before *u*; and he observed that the signs he still read (𒆠) *kh* and (𒋾) *th* were also only found before *u*. It required, therefore, no

[1] *J. R. A. S.* x. 176.

great effort to deprive them of their *h*, and to range them with the others as the second signs in the surd grades for *k* and *t*.

Once the existence of this law was inferred, Rawlinson was led to make other modifications in his original alphabet, in order to bring it into strict conformity, and in every instance the alteration has been confirmed. The following Table shows the distribution of the letters into the various classes and grades, and the modifications they underwent. When they fail to comply with the supposed law, the deficiencies are left blank: when they violate it, the offence is marked by '!'.

RAWLINSON'S ALPHABET, AFTER AUGUST 25, 1846[1]

Gutturals. Followed by *a*	( )	by *i* ( )	by *u* ( )
k surd			
kh aspirate		—	
g sonant		?	
Palatals			
ch surd			—
j sonant			—
Dentals			
t surd			
th aspirate			
d sonant			
Labials			
p surd			 !
f aspirate	 ?	?	?
b sonant		 !	 !
Nasals			
n surd			
ñ aspirate	 ?	?	?
m sonant			

[1] *J. R. A. S.* x. 185.

RAWLINSON'S ALPHABET—*continued*

Semi-vowels	Followed by *a*	by *i*	by *u*
r surd			
y aspirate			
v sonant			
Sibilants			
s surd			
sh aspirate			
z sonant		—	
Aspirate			
h			

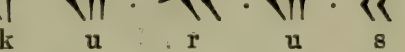
Compound  , *tř*

Doubtful final, 

One of the results of the classification of the consonants according to the vowels that follow them was to introduce a considerable change in the method of transliteration. It is only in exceptional cases that the *a*, following a consonant, is found in the text, but its inherence is inferred. When, therefore, an *i* or *u* immediately follows a consonant with an inherent *a*, instead of transliterating as formerly such a group as  *gi* and  *gu*, they are now written *gai* and *gau*; and this modification has materially assisted the explanation of the words in which such combinations occur. An interesting proof of the accuracy of this system is afforded by the word 'Kurus,' which was so long an object of contention. The genitive is denoted by the insertion of an *a*—'Kuraus.' The letter  (*r*), which is followed by *u*, is used for the nominative 'Kurus'; but the letter  (*r*), which has an inherent *a* is substituted in the genitive. Thus:

Nom. *Kurus*, 

k u r u s

Gen. *Kuraus*, 

k u r(a) u s

The interchange of these two signs in 'Kurus' finally disposed of a supposition started by Burnouf and supported so lately as Holtzmann,[1] that 𐎻 might be *l*, and that the Persians pronounced the name of their great king 'Kulus.'

Considerations of the same kind greatly assisted Rawlinson in rectifying some of his values. For example, in the case of 𐎲, which he had hitherto read *gh*, he found that it replaced 𐎪 the *g* before *a*, in order to form the locative singular 'Mar*gau*w; and consequently he had no hesitation 'in placing the two characters, not merely in the same class, but in the same grade of that class.' It is therefore now found among the gutturals as *g* before *u*.[2]

Precisely the same considerations led to the rectification of 28 (𐎹) *j'h* to *j*. He found the locative of Susiana ('uwajaiya') written 𐎹 . 𐏐, i.e. *ji*, which he knew from grammatical considerations must stand for *jai*; and he therefore concluded that 𐎹 is *j* before *a*; which is correct.

A farther result of this classification is to supply the sounds of the missing vowels *e* and *o*, for when *i* or *u* follow a consonant with an inherent *a*, the diphthongs *ai* and *au* are produced, which correspond phonetically and grammatically to the diphthongs *ê* and *ô* in Sanscrit.[3] Such were the results communicated by Rawlinson in his Supplementary Note, which, as we have seen, crossed the detailed account of Hincks's paper on the same subject. It was received in London on October 8, and its substance was read at a meeting of the Society on December 6, and noticed in the 'Athenæum' of December 19.[4] The alterations in the

[1] Holtzmann, *Beiträge*, p. 152.
[2] *J. R. A. S.* x. 177.
[3] *Ib.* x. 175.
[4] *Athenæum*, December 19, 1846, p. 1302. Cf. *ib.* November 22, 1884.

method of transliteration required by the new system were, as we have said, carried out under the supervision of Mr. Norris.[1]

Rawlinson has not drawn up a formal grammar of Old Persian, but he loses no opportunity of comparing its forms with Sanscrit and Zend, and pointing out wherein they agree and wherein they differ. He shows that the initial letter *a*, so frequently employed, is used to express the temporal augment in the past tenses of verbs, and according to the analogy of the Sanscrit it is short. But the short *a* of Sanscrit terminations is changed into long *a* in the cuneiform; and the mute terminal consonants of the former are usually omitted, as in the endings 'as,' 'at,' 'an,' 'am,' a rule applicable to both nouns and verbs. He shows also that the suffixes in *i*, so common in Sanscrit and Zend, are all lengthened into 'iya'; a rule also applicable to the terminal *u*.[2] If he had finished his chapter on the Vocabulary, the student might have been able from it to put together a complete grammar. Under their initial letters we find 'adam,' the personal pronoun 'ego'; 'aniya,' 'alius'; the two demonstrative pronouns 'ava,' 'that,' and 'iyam,' 'this';[3] correctly traced through all their cases so far as they were known—and the same is done for the cases of the verbs 'am'iy,' 'I am,' and 'thah,' 'to say';[4] and in each he shows the close similarity they exhibit to Sanscrit and Zend. In his notes to the translation he dwells especially on the construction of the sentences and upon the historical questions raised by the subject-matter of the text. He gives an elaborate analysis of each letter of the cuneiform alphabet, comparing

[1] *J. R. A. S.* x. 195, *note.* [2] *Ib.* x. 56, 60, 65, 69.
[3] *Ib.* xi. 15, 20, 47, 72. *Cf.* Spiegel, pp. 180, 204, 208, 210.
[4] *Ib.* xi. 27, 176. *Cf.* Spiegel, p. 209, 222.

its use and pronunciation with those of other languages. He can draw a wealth of illustration at pleasure from the kindred languages of Sanscrit, Zend, Pehlevi, Persian, as well as from Pali, Devanagari, Hebrew, Chaldee, Syriac, and Turkish; and although he displays an amount of knowledge that is truly surprising, he defers with unaffected humility to 'the more experienced philologist.'[1] He classifies Old Persian as belonging to 'the Arian type, resembling Sanscrit very closely in its grammatical structure; but in its orthographical development more nearly approximating to the Zend: while in the peculiarity of organisation which requires the juxtaposition of certain consonants with certain vowels it exhibits something of a Scythic character.'[2] He was not disposed to admit the antiquity then beginning to be claimed for Zend. He thought that in comparison with Old Persian it was modern. He imagined that the latter became gradually extinct after the age of Alexander, and that it was succeeded by Zend and Pehlevi, the former as a hieratic and the other as a demotic language but both derived from it.[3] He was clear at least that Old Persian could never have descended from Zend, though he reluctantly admits the possibility of their contemporary existence. His unwillingness to allow the antiquity of Zend was due in great measure to the legendary character of the Zendavesta, a book which he considered could not have been written till after the cuneiform Persian had been entirely forgotten. Otherwise, he said, 'the priesthood could neither have had the audacity nor the desire to darken authentic history by the distorted and incomplete allusions to Jemshid and the Kayanian monarchs which

[1] *J. R. A. S.* x. 83. [2] *Ib.* p. 40. [3] *Ib.* p. 50.

are found in the Vendidád Sadé and in the ancient hymns.'[1]

The appearance of Rawlinson's work was received with feelings of enthusiasm in Germany. The reproach that England had hitherto neglected the cuneiform records was at length effaced, and in such a manner as to entitle her to claim the first place in the roll of discovery. Benfey declared that few, if any, of the contributions made in recent times in the field of Oriental research could compare with it in importance.[2] Major Rawlinson, he says, displays an extraordinary aptitude for decipherment, and an accuracy and depth of philological learning that render it peculiarly fortunate that such an important document should have fallen into his hands. In mere length, the inscription exceeds by more than a hundred lines all those published by Lassen put together. It consists of five columns of about four hundred and ten lines, and, although there is considerable repetition, it nevertheless offers a great variety of words and phrases which added immensely to the knowledge previously acquired.[3] One great difficulty with which he had to grapple was the very imperfect state of the text. A glance over the plates will show the numerous blanks left in the writing in consequence of injury to the rock. Rawlinson's copy was so carefully executed that he committed only one serious error, the omission of a line in the fourth column. The other imperfections are due entirely to the ravages of time. In the first column there is a large fissure on the right hand, extending from the top to the twenty-fifth line, and again from the sixty-third

[1] *J. R. A. S.* xi. 51.

[2] *Die Persischen Keilinschriften,* Leipzig, 1847.

[3] In the Persepolitan texts there are not more than four hundred words; the Behistun comprises ten times as many as all the rest put together. Darmesteter, quoted by Perrot, *History of Art in Persia,* p. 33, *note.*

line to the end, besides numerous occasional gaps elsewhere. But the second column is in a much worse condition. 'A fissure, varying in breadth, caused by the percolation of water, bisects it and destroys the continuity of the writing throughout its whole extent.'[1] The third is nearly perfect, except at the bottom, where several lines are wholly lost. The fourth column is worse than the second; 'a fissure transects the tablet longitudinally,' and in the lower half 'the rock is more or less broken by the trickling of the water.' But when we come to the fifth, we find 'a state of such deplorable mutilation that it would be waste of time and ingenuity to undertake an analysis of the text, or to attempt anything like a connected and intelligible translation.' In the face of these difficulties he was obliged to have recourse to very elaborate and ingenious restorations. At the end of the second column, for instance, he found the Susian copy perfect, and this enabled him to 'restore' the Persian text. It is one of the first instances of a long translation from the Susian, and his version of it turned out afterwards to be correct.[2] In the numerous repetitions that occur so frequently, he found a safe guide in other passages of the inscriptions. Sometimes, however, he had to work on much less solid foundation, as when he sought help from other sentences that were only 'of nearly similar construction'; or when his restoration was 'generally borne out by the context'; or merely by considerations of 'grammatical propriety.' In such cases he could never arrive at more than a high probability. He had frequently to measure the length of a blank and then tax his memory to supply one or more words with the required number of letters that would fit into the vacant place and at the same time make

[1] *J. R. A. S.* x. p. xlvi.

[2] Spiegel, p. 23.

sense. Sometimes, as in the fourth column, the sense was so obscure that he feared his 'restorations will be considered rather bold than felicitous.'[1] Occasionally his courage failed him altogether, and he was obliged to confess that 'I cannot restore the [passage] even conjecturally.' It is remarkable how uniformly successful his 'conjectural restorations' were found to be. He imposed the most admirable restraint upon the intuitive faculty with which he was so eminently gifted; and his emendations exhibit a patience and sobriety that many scholars engaged in similar work might advantageously study. When he had surmounted the imperfections of the text so far as possible, he set himself to the task of translation, and achieved the most notable success in this department of literature. When we consider that he had to unravel the intricacies of long sentences, determine the grammatical relations of multitudes of new words and fix their meaning by a patient comparison with Zend or Sanscrit analogies, the unfailing divination he displays is absolutely marvellous. A careful comparison of this first translation with that now accepted as correct will show comparatively few alterations, although the labours of many scholars have since been devoted to a rigorous study of the same text. The main body of the translation remains the same, word for word, down to the minutest particulars. Some doubtful passages, concerning which Rawlinson himself entertained doubts, have been cleared up; but it rarely happens even in these that the original translation was in fault as to the general meaning.

The long list of commentators begins with Benfey, whose tract on the subject was sent to the press in January 1847, when he could only have seen the first

[1] *J. R. A. S.* x. p. lvii.

part of Rawlinson's work. Some of Benfey's suggestions have been accepted, others definitely rejected. A few instances will illustrate the nature and extent of the earliest attempt at revision. Almost the first error occurs in Column I. par. 10, where we find: 'The troubles of the state ceased which Bardius excited.' Rawlinson warns us that 'this sentence cannot be read with any certainty,' on account of a blank in the inscription, and the doubt attaching to the word 'azada.' Benfey derives this word from the Sanscrit 'ajatá,' which signifies 'deprived of children,' and he translates the passage: 'The kingdom was deprived of heirs because Bardius was killed.'[1] But this alteration turned out to be quite unauthorised. 'Azda,' as the word is now written, is identified with the Armenian 'azd,' 'information,' corresponding to the Sanscrit 'addhâ,' 'certain'; and Rawlinson himself corrected the passage in 1873 to 'It was not known to the state that Bardius was killed.' The accepted version given by Spiegel is 'The army had no information that Bardius was killed.'[2] Soon after, we are told that 'Cambyses, unable to endure his [misfortunes], died' (par. 11). Benfey attributes his death to 'overwhelming anger' (übergrossem Zorn); but Oppert showed that the word really means 'suicide.' In 1873, Rawlinson had made the rectification himself.[3] Not more happy was the substitution of 'Liebet mich' for the often repeated exclamation Rawlinson renders 'Hail to thee!' and which properly signifies 'Go forth!' as Rawlinson said in 1873.

There are, however, some instances where the

[1] Benfey, *Die Persischen Keilinschriften* (Leipzig, 1847), p. 9.
[2] *Records of the Past*, O.S. i. 112. Spiegel, pp. 7, 86.
[3] *Records*, loc. cit. p. 112.

commentator makes a useful correction. The erroneous reading, 'he would frequently address the state' (par. 13), he altered to 'er möchte das Reich mit Macht vernichten,' which approaches Spiegel, 'er möchte viele Leute tödten,' or, as Rawlinson said in 1873, 'he slew many people.' So also the passage 'afterwards Dadarses remained away from me in the field' (Col. II. par. 9), is improved to 'dann erwartete mich dem Befehl gemäss Dadarses.' This Rawlinson changed in 1873 to 'afterwards Dadarses waited for me there,' the accepted version being 'dort erwartete mich Dadarses so lange' etc. It will be observed that the critic was himself liable to fall into superfluous additions not far removed from error. Sometimes, however, he avoided this trap, as when he substituted 'he lied' (Col. IV. par. 1) for Rawlinson's 'impostor,' and 'if you so think' (par. 5) for 'if it should be thus kept up.' But in a large proportion of cases Benfey follows his leader into error with perfect complacency. In one or two places Rawlinson is obliged to confess that the difficulties are so great that translation is almost impossible. One of these occurs in the description of the religious reform after the death of Gomates, the Magian (Col. I. par. 14). Referring to this passage, he says: 'Of several of the most important words the orthography is doubtful; of others the etymology is almost impenetrable, and the construction, moreover, in some parts renders the division into sentences a matter of serious embarrassment.'[1] But the difficulties have been found almost as insuperable by his successors. They have not been able to derive assistance from the Susian and Babylonian columns, where the difficulties are even greater. The meaning of some words still remains a mystery, and even the general drift of the passage is open to

[1] *J. R. A. S.* x. 206.

discussion. Spiegel[1] warns his readers that the explanation of the whole paragraph is still so uncertain that no opinion as to the religious history of the times can be prudently based upon it. But such passages as these are fortunately of rare occurrence; and from the moment of Rawlinson's publication the contents of the inscription were known as thoroughly as they are at the present day. The careful study of two generations of scholars has changed a word here and a word there, and cleared up the meaning of a few doubtful passages, but in all substantial respects the translation remains unaltered.

Rawlinson's revised translation of the inscriptions published two years before by Lassen forms the concluding chapter of his Memoir. We have already had occasion to contrast the merits and demerits of the two translators. Rawlinson's transliteration presents an entirely modern appearance in consequence of the correctness of the values of so many signs. There are still a few errors, owing chiefly to the prolongation of the final syllable in such words as 'thatiya,' 'tyaia,' and others, an error already signalled by Hincks. But these are of small importance. As regards the translations, he brought from the study of the Behistun record a knowledge of the language that no one else then possessed, and he was able at once to resolve difficulties that had baffled all previous attempts. Such expressions as 'generosus [sum]' finally disappeared for the correct rendering 'he says.' Sentences

[1] Spiegel, p. 89. Spiegel translates (1881): 'Die Plätze der Anbetung, welche Gaumâta der Mager zerstört hatte, bewahrte ich dem Volke, die Weideplätze (?), die Heerden, die Wohnungen je nach Clanen, was Gaumâta der Mager ihnen weggenommen hatte' (p. 9). Weissbach (1893): 'Die Tempel, welche Gaumâta, der Mager, zerstört hatte, stellte ich wieder her, für das Volk die Hilfsmittel, die Herden und das Wohnen in den Häusern (?) welche Gaumâta, der Mager, geraubt hatte' (p. 15).

that were hitherto entirely misapprehended now appear in their correct form. 'The son of Arcis' gives place to 'the son of a Persian, an Arian of Arian descent.' The last paragraph of the same inscription is satisfactorily explained. Even where he fell short of success, as in the end of the I inscription, he made important contributions to the elucidation of intricate passages.

Rawlinson added the inscription on the Venice vase, not known to Lassen. It had been recently published by Longpérier in the 'Revue Archéologique' (1844), who thought it should be referred to Artaxerxes I. Rawlinson translated it 'Artaxerxes the King,' and assigned it to Artaxerxes Ochus. Opinion has since been divided upon the subject; Spiegel and Menant follow Longpérier; Oppert and Weissbach follow Rawlinson.

Very few additional inscriptions in Old Persian have been brought to light since the date of Rawlinson's Memoir. But a good deal of labour has been spent in clearing up the doubtful passages in those already known. In some cases the text was, as we have said, so much mutilated as to defy intelligible translation. This was the case with the fifth column of the Behistun; and Rawlinson thought it best to omit it altogether from his revised edition of 1873.[1] This diffidence, however, may have stimulated M. Oppert to attempt a restoration of the text. We have already described the process followed by Rawlinson. It consisted in selecting a word or words containing the number of letters required to fit into the space left vacant by the erasure of the text, and which would at the same time make some kind of sense. It is obvious how much of the success of this operation will depend upon the ingenuity of the restorer; and still more upon the

[1] *Records*, O. S. i. 128.

restraint he exercises over his imagination. No one is more distinguished than M. Oppert for the ingenuity of his conjectural restorations; and the column that Rawlinson abandoned as hopeless appears in Oppert's edition as the 'Complementary Behistun Text,' and in a comparatively perfect condition. In this case he could receive no assistance from the translations, because both the other columns are destroyed; and not much by comparison, for there are few parallel passages. His work is, therefore, the more admirable as a display of the imaginative faculty. But his reading has not been accepted by Menant or Spiegel, or by Weissbach.[1] No doubt we owe the 'Testament of Darius at Naksh-i-Rustam' to the same method which appears to have been exercised upon the few lines copied by Westergaard from the long inscription below the one known and which Spiegel declares it is clearly impossible to translate.[2] One of the three short inscriptions engraved above the figures of the Tomb has also given rise to some discussion. Mr. Tasker, an English traveller, sent them to Rawlinson, by whom they were published in the 'Journal of the Asiatic Society,' and an improved version appeared some time afterwards.[3] Even at that period considerable difference of opinion existed as to the meaning of at least one of these short legends. According to Rawlinson, Norris, and Oppert, Aspathines is the 'keeper of the arrows' of King Darius; but Norris adds 'chamberlain' and Oppert 'quiver-bearer.'

[1] *Ib.* ix. 68, 69. *Cf.* Spiegel, pp. 41, 109; Menant, *Les Achéménides*, p. 122; Weissbach, *Altpersischen Keilinschriften.* p. 31.

[2] *Records*, O.S. ix. 77; Rawlinson, *J. R. A. S.* x. 311; Spiegel, p. 121. M. Benfey attempted to restore this inscription, but in 1852 Oppert declared that the labour was a simple loss of time. It is perhaps to be regretted that he did not adhere to his first impression. *Journal Asiatique*, xix. 172 (March 1852).

[3] Vol. xii. p. xix, xv. p. 432; Spiegel, p. 59; Oppert, *Rec.* O.S. ix. 78.

Elsewhere Oppert translates it quite differently: 'Aspathines, minister of King Darius, who makes the law observed.' Spiegel's version is: 'Aspacanâ des Königs Darius genosse, Zügelhalter (?).' [1]

In the autumn of 1846, when Rawlinson's 'Memoir' was passing through the press, Dr. Frederick Hitzig published a tract on the Persian Text of the Tomb Inscription of Darius; but his translation shows little advance beyond the point reached by Lassen.[1] The edition of the Persian inscriptions by Theodore Benfey made its appearance early in 1847. His transliteration suffers from having been made before the method of writing explained by Hincks and Rawlinson in the previous year had become generally known. We have already sufficiently noticed Benfey's translations, which show considerable improvement on those of Lassen, but fall far short of the comparative excellence obtained by Rawlinson. In the course of the summer, another writer appeared whose name has been already mentioned and who was destined to occupy a very important place in the future history of Cuneiform Research. M. Oppert was born in Hamburg in 1825, and studied successively at Heidelberg, Bonn and Berlin. At Bonn he was a pupil of Lassen, and to this circumstance probably we owe his early interest in cuneiform and the publication of a tract on the subject at the age of twenty-two. The promising youth was precluded by his Jewish faith from holding a professorship in Germany, and consequently he went to Paris in 1847. His later writings have all appeared in the French language, and for this reason he is generally included among the number of French scholars, of whom, till quite recent years, he was by far the

[1] Spiegel, pp. 59, 122.

[2] *Die Grabschrift des Darius*, Zürich, 1847.

ablest representative.[1] So far as we are aware, the pamphlet on the 'Lautsystem des Altpersischen' was his first effort in this department of knowledge.[2] In it he explains the principle that regulates the employment of the consonants in substantially the same manner as Hincks and Rawlinson had done in the previous year. He had evidently arrived at his conclusion independently, and it is remarkable that he was not better informed of the progress that had recently been made. It might be supposed that the attention of everyone interested in the subject would be directed to the appearance of Rawlinson's 'Memoir,' which was then eagerly expected. It was in fact published before May 1847, and Oppert's tract was not sent to press till July.

With the publication of Rawlinson's Memoir, in 1846–7, the decipherment of the Persian inscriptions may be considered accomplished. In 1850, he could write that there 'are probably not more than twenty words in the whole range of the Persian cuneiform records upon the meaning, grammatical condition or etymology of which any doubt or difference of opinion can at present be said to exist.'[3] The value of his own contribution to the general result received the fullest recognition. Professor Max Müller declared to Canon Rawlinson that, 'thanks mainly to your brother, we have now as complete a knowledge of the grammar, construction and general character of the ancient Persian language as we have of Latin.'[4] He was greeted as the Champollion of the new decipherment, a position he has retained to a large extent in Germany and France. So late as 1895, M. Oppert found

[1] Vapereau, *Dictionnaire des Contemporains.*
[2] Published at Berlin, 1847.
[3] *J. R. A. S.* xii. 403.
[4] *Memoir* by Canon Rawlinson, p. 165.

occasion to remark that, 'after Rawlinson it was only possible for other scholars to obtain gleanings in the field of Persian cuneiform interpretation.'[1] In his own country, however, he seems to have suffered for a time from the singular affectation that was so long in fashion, of looking to Germany alone for all the springs of knowledge. As a matter of fact, in this department at least, few Germans, with the exception of Grotefend, made any important contribution. Rask, Lassen, Westergaard, were all Scandinavians, and it is certain that for many years Rawlinson continued to be the source whence Continental writers drew most largely; and the neglect into which he fell at home occasioned the surprise of at least one eminent Frenchman. 'Young English and Germans,' says M. Oppert, 'pretend not to know him. An Englishman once told me he had never read a line of Rawlinson. I replied: "I supposed just so; if you had read him, your papers would be less imperfect than they are."'[2] This testimony to the great services of Sir Henry Rawlinson is given by the scholar who for many years occupied by far the most prominent position among Continental writers upon cuneiform subjects, and who has himself contributed largely to the progress of the study.

In 1851, M. Oppert undertook a complete revision of the whole series of Achaemenian inscriptions. The work appeared in the 'Journal Asiatique,' between February 1851 and February 1852, and was afterwards published in a separate form.[3] He introduced a considerable number of alterations, in both the transliteration and translation, and, so far as we have noticed, a large proportion of them have been accepted.

[1] *Memoir* by Canon Rawlinson, p. 324. [2] *Ib.* p. 33.

[3] *Mémoire sur les Inscriptions des Achéménides*, Paris, 1852, 8vo. *Journ. Asiatique* (4e série), vols. xvii.–xix.

He criticised some of Rawlinson's opinions, but rarely with asperity, and he generously acknowledges that the English scholar 'a grandement mérité de l'histoire du genre humain.'[1] He subsequently revised his own translations for his book on the 'Expédition en Mésopotamie,' published in 1858. In the same year Rawlinson made an amended version of the Behistun Inscription for the edition of Herodotus published by his brother; and again in 1873 for the 'Records of the Past.'[2] The other inscriptions were once more revised by Oppert in 1877 for the same useful publication.[3] But meanwhile a complete edition of the whole Persian inscriptions had been published by Spiegel in Germany in 1862,[4] and in France in 1872, by M. Menant.[5] The latest publications on the subject that have come under our notice are the valuable treatises on the languages of the first and second columns by Weissbach,[6] and of the third column by Dr. Bezold,[7] accompanied in each case by a revised text, transliteration and translation.

[1] *Journal Asiatique*, xviii. 560.

[2] *Rec.* O. S. i. 107. [3] *Ib.* ix. 67.

[4] *Die Altpersischen Keilinschriften*, von Fr. Spiegel, second edition, Leipzig, 1881.

[5] *Les Achéménides et les Inscriptions de la Perse*, par Joachim Menant, Paris, 1872.

[6] *Die Altpersischen Keilinschriften*, von F. H. Weissbach und W. Bang, Leipzig, 1893. *Die Achämenideninschriften zweiter Art*, von F. H. Weisbach, Leipzig, 1890.

[7] *Die Achäm. Ins. des. Babylonischen Textes*, von Dr. Carl Bezold, Leipzig, 1882.

CHAPTER V

DECIPHERMENT OF THE SECOND OR SUSIAN COLUMN—WESTERGAARD TO OPPERT—A.D. 1844–52

THE signal success that had been achieved in the decipherment of the Persian column of the Achaemenian inscriptions greatly facilitated the accomplishment of the difficult task that still remained. In the other two columns it was comparatively easy, especially in the short inscriptions, to identify the combinations of signs that corresponded to the proper names in the Persian, and to check them by their recurrence in the positions where they were again to be expected. The satisfactory application of this process left no doubt that the writing in both columns was from left to right; and that they were translations of the same text. When the groups of characters composing the proper names were ascertained, the next process was to separate them into letters or syllables, and to identify each with the corresponding letter in Persian. The result of this inquiry was to show clearly that the writing was partly syllabic and to raise the suspicion that it was also partly ideographic. It was seen that the signs were too numerous to be limited to an alphabet, and that long words could be expressed with comparatively few signs. In some cases its ideographic character was illustrated by the occurrence of only one sign to represent an entire word—such as 'King.' It was also observed that in the second column a vertical wedge usually preceded proper names as a determinative.

From the time when Niebuhr pointed out that there were three essentially different styles of writing, and that each style was uniformly reproduced in the same relative position in all the inscriptions, the subject had given rise to much speculation. It was at first thought that the three columns repeated the same text in the same language written in different characters.[1] Grotefend, however, recognised that the languages also were different, but he thought they were dialects closely related to each other. The first, as we have seen, he considered to be Zend, which he called the Median language; the second he thought was Parsi, or the language of the Persians; and the third another dialect of Persian, possibly Pehlevi.[2] Subsequently he changed the order of the last two, and described them respectively as resembling Pehlevi and Parsi.[3] As regards the signs, Münter thought that in the second column they were syllabic and in the third 'hieroglyphic'; Tychsen and Grotefend thought that both had signs for vowels and consonants, which were at times replaced by an ideogram. Grotefend further saw that the second included signs for the combination of a consonant and vowel; the third he considered had no vowel signs, but used signs for the triple combination of consonant, vowel and consonant.[4] He entirely rejected the idea that either system was purely ideographic. In 1824, he prepared a Table for the third edition of Heeren, showing some words that corresponded to each other in the three languages. The inscriptions he selected

[1] This opinion is attributed to Niebuhr by M. Oppert (*Expédition en Mésopotamie*, 1859, ii. 2); in the passage referred to Niebuhr merely says there are three alphabets, but says nothing about their being in the same language (Niebuhr, ii. 113).

[2] Heeren, *Historical Researches* (Eng. ed.), ii. 324. Durow, *Die Assyrische Keilschriften erläutert* (Wiesbaden, 1820), p. 38.

[3] *Beiträge*, 1837, p. 24.

[4] Heeren, *ib.* pp. 329–30.

were the G of Niebuhr, the inscriptions at Murgab and on the Caylus vase. These he arranged word for word in parallel columns opposite to one another. He used a full stop to indicate the combination of wedges that went to form each letter or syllable; indeed at that period it required scarcely less skill to divide the words into letters than to distinguish the words themselves. No attempt was made to assign values to the characters, and for many years no farther progress was made. In 1837 he still thought the three columns represented dialects of Old Persian, though they might not exactly correspond to Zend, Pehlevi and Parsi. The two first he considered nearer to each other as regards language; but he remarked that the two latter presented a closer resemblance to one another as regards the writing. Still he said the resemblance was by no means so close as that between the third column and the Babylonian inscriptions. He saw indeed that the writing of the third column was a mere simplification of the Babylonian; and he hasarded the useful conjecture that the writing of the second might be only an arbitrary modification of the third. He would not even yet admit that either could be, strictly speaking, described as syllabic; and he entirely rejected the idea that the third was a Semitic language.[1]

But the study was now upon the point of entering on an entirely new phase. We have already seen the success with which Burnouf and Lassen applied the discovery made by Grotefend to the long list of names in the I inscription. The visit paid in 1843 by Westergaard to Naksh-i-Rustam resulted in the recovery of a farther list of provinces from the Tomb of Darius. On his return to Germany, he made over his copy of the first column to Lassen, who was best

[1] *Beiträge*, 1837, p. 39.

qualified to turn it to account, and he devoted himself to an attempt to decipher the language of the second column. The result appeared in the 'Zeitschrift für die Kunde des Morgenlandes' of 1844; and the same year, in English, in the 'Mémoires des Antiquaires du Nord.'[1] In 1845, the Memoir was republished in German, along with Lassen's Second Memoir, and this, as the latest, must be regarded as the most authoritative version.[2] The investigation is based upon an analysis of the various proper names contained in the inscriptions. Westergaard began with the well-known names of the Kings which Grotefend had turned to such good account, and afterwards reviewed those of the provinces recently deciphered by Lassen. From these he obtained a sufficient number of values to attempt a transliteration of the more common words occurring in the Persian version, and especially in the well-known form that opens so many of the inscriptions. He has given us a transliteration of this passage, which is the first ever made into Roman characters of a Susian inscription.[3] His work was necessarily based upon Lassen's defective decipherment of the Persian signs; and it was therefore inevitable that it should reproduce the same erroneous values. He transliterated all the various inscriptions, beginning with those of Xerxes as the shortest and simplest, and proceeding to those of Darius, including the one at Naksh-i-Rustam, which he was the first to copy.[4] It is curious to compare the earliest attempts at transliteration with those subsequently made by Oppert and Weisbach. It will

[1] Copenhagen, 1844.

[2] Bonn, 1845. Westergaard wrote a later essay on the same subject in Danish, which we have not been able to consult (Kjöbenhavn, 1856).

[3] Copenhagen edition, pp. 330, 338.

[4] *Ib.* pp. 340, 364. The E inscription from the seventeenth line may be seen at page 347. *Cf.* with Weisbach, *Die Inschriften Zweiter Art*, p. 82.

be seen that few of the words in his glossary could now be recognised. He had little opportunity of displaying his skill as a translator, for in this department he implicitly followed Lassen's rendering of the corresponding Persian column, and we find the same errors in both, from 'Arça' downwards; but he concludes with the K inscription, which has no Persian counterpart, and here he achieved a respectable success. He was able to make out sufficient to show that Darius laid claim to the foundation of the Persepolitan platform.[1] In the German edition he omits his adventurous transliterations (as well as the declination of Ku, 'king,' which it will surprise some scholars to hear takes the forms of 'Kuyoni' in the accusative singular, and 'Kuthin' or 'Kuthrar' in the genitive plural), and he has consequently lessened the interest, if not the value, of that work.[2]

The result of his investigations was to show that the language was partly alphabetical and partly syllabic. Down to 1837, Grotefend had recognised about sixty different signs.[3] Westergaard rightly calculated, from the relation of the vowels to the consonants, that they must exceed a hundred, but his actual identification only reached eighty-two. He noticed two other probable groups, but he was unable to decide whether they formed one sign or two. One of them has now gained admission.[4] In consequence of the great care he exercised in the collation of his copies only four defective signs found their way into his list.[5] He

[1] *Cf.* Copenhagen edition, p. 419; Bonn ed. p. 113.

[2] Copenhagen edition, p. 323. *Cf.* this with the declination of the same word by De Saulcy (*Journal Asiatique*, 1849, xiv. 179), where the accusative singular is 'Keiounay,' and the genitive plural 'Keiouyna' or 'Keioulara'!

[3] *Beiträge*, 1837, p. 42.

[4] No. 24 of Weisbach.

[5] Nos. 9, 10, 18, 65. Appendix C.

noticed the recurrence of twelve other signs, which he ascribed to the error of the copyist, though he thought three of them might be genuine. It turned out that three were genuine, but only one of those that seemed to him likely to be so.[1] In addition to the determinative sign before proper names, which Grotefend had pointed out, he recognised another, the horizontal wedge, which is sometimes interchangeable with it. It will remain a curiosity in the history of decipherment that Westergaard should have gone out of his way to declare that the words for God, Ormuzd and Heaven were not preceded by a determinative—'their importance being, no doubt, thought too great to need any such distinction.'[2] He, in fact, mistook the determinative sign itself for the vowel which happens to precede his rendering of these three names.

He thought he had discovered signs for six vowels (*a*, *â*, *i*, *e*, *u* and *o*), and eighteen consonants.[3] Of the former only one (*u*) turned out to be correct. His *a* and *i* have both syllabic values (*an* and *in*). His long *â* is a defective sign (No. 10). His *e* should be *i* and his *o* an *a*. Only four of his consonants were ultimately found to be used as alphabetical signs, and for these his values are correct (*t*, *kh*, *s* and *m*). A few of the others represented correct consonantal values, though used syllabically. For example, his *p* is *ap*, his *r* is *ra*, his *s* is *as*, his *n* is *na*. He was more fortunate in his syllabic values, sixteen of which have been accepted as strictly correct, if we include two where *w* is

[1] No. 12 in Weisbach's list: the others are 63 and 65 in the same list.

[2] Copenhagen edition, p. 278. This statement is softened in the Bonn edition (p. 6), where he merely says that neither of the two determinatives he had recognised preceded these words. *Cf. ib.* p. 124.

[3] He thought possibly the vowels might be limited to the long and short sounds of *a*, *i* and *u*, and in that case he was disposed to change his *e* into *i*, which would have been correct (p. 118).

substituted for the more usual *m*; and eight others may be passed as approximately correct (Nos. 5, 11, 12, 22, 23, 60, 69, 81). The values he attached to about fifteen other signs were, however, highly inaccurate and misleading; and he was unable to assign any value whatever to twenty-two out of his eighty-two signs.[1]

He could not identify the sign for *l*; no doubt because there was no corresponding sound in the Persian by which he was guided, and he thought that no syllable began with *m*. He considers all the syllables begin with a consonant, though he detected two possible exceptions, where the syllables appear to be *as* (Nos. 8 and 82). Neither of these are in reality exceptions, but there are numerous other instances where the vowel is the initial. None of his syllables exceed two letters, though later investigation has shown that there are several cases where a vowel separates two consonants. He noticed that the syllabic sign was frequently replaced by two signs to express the simple consonant and the vowel. He observed the peculiarity that the language knows of no difference between the sounds of *m* and *w*, both being written with the same letter; and he also showed that the sonants are generally absent, for while *k*, *p*, *t* are represented, he could not find *g*, *b*, or *d*. He saw that the consonants are sometimes doubled in the middle of a word; and he conjectured that this form was adopted to indicate the distinction. Thus, he thought the syllabic sign for *pi* might express either *pi* or *bi*; but if preceded by the alphabetical sign for *p*, the two together denoted the surd.

At a time when the affinities of the language were entirely unknown St. Martin had given it the name of Median, no doubt under the supposition that it was

[1] Bonn edition, pp. 118–119. See Appendix C.

allied to Persian and spoken by the Median branch of the common Aryan race.[1] The investigations now concluded by Westergaard showed for the first time that its affinities were with the Scythic or Turanian family of languages, and the inconvenience of retaining the name of Median first became apparent.[2] There could be no doubt that the Median conquerors were Aryans, as may be shown from the names of their leaders, and their close relationship to the Persians in race and language was accepted by all the early historians as self-evident. It is clear, therefore, that the language of the second column is not theirs, yet Westergaard determined to adhere to the name of Median as its most appropriate designation. He was led to adopt this course chiefly because there appeared to be no other district except Media where it could have been spoken, and also because its graphic system seems to indicate contact with Assyria. There can be little doubt that his decision was fully justified at the time, and, to avoid unnecessary confusion, in referring to the earlier writers we have in this chapter generally followed their description of the language of the second column as Median. On the other hand, modern discovery has tended to increase the importance of Susa, by showing that at least a portion of its territory had become the hereditary dominions of Cyrus, before his accession to the Persian throne. At the same time the connection between the language of the second column and that of the ancient inscriptions found in the district has been more completely recognised. There appears good ground to believe that the Aryan race had been established throughout Media long before they rose into

[1] Burnouf, *Mémoire sur Deux Inscriptions* (1836), p. 2.

[2] Westergaard (Bonn edition), pp. 4, 123. *Cf.* Copenhagen edition, p. 272.

historical importance. The inconvenience of calling a Scythian language after the Aryan Medians has therefore manifestly increased, while the name of 'Susian,' though not free from objection, has become more appropriate, and is the one now generally adopted. How far the language was spoken beyond the limits of Susiana, among the subject tribes of Media, may still be open to conjecture. There is, as we shall see, some evidence in favour of its extension.

It will be recollected that early in 1846 Rawlinson had been able to translate the whole of the last paragraph of the second column of the Behistun inscription from the Median or Susian text, the Persian version of that passage having been found illegible.[1] Several years later Mr. Norris, with all his special knowledge, was obliged to confess that he was 'unable to give a better translation than Colonel Rawlinson has prepared' of that very paragraph.[2] In the same year Rawlinson announced the opinion his studies had led him to adopt upon this subject. It does not appear that he was as yet acquainted with Westergaard's essay; but he had arrived at the same conclusion with reference to the Scythic affinities of the language. He likewise estimated the number of the signs at about a hundred, 'the vowels, unless they commence a syllable, being for the most part inherent.' He does not appear to have noticed the absence of sonants, but he saw that there must be considerable interchangeability in letters of the same class, and perhaps even between *n* and *l*. He added that the language evinced a repugnance to *r*. He held that 'it resembles the Scythic in the employment of post-positions and pronominal possessive suffixes.' In the declension of nouns it uses post-fixed particles that are frequently the same as in modern

[1] *J. R. A. S.* x. 228. [2] *Ib.* xv. 115.

Turkish, and he notified the existence of a Tartarian gerund. The pronouns are, he says, Semitic; the adverbs Aryan; the vocabulary a strange agglomeration of Turkish and Semitic. Although its construction is more akin to Aryan than Scythic, yet upon the whole he decides that its affinity is with the Scythic, and suggests that that would be a more appropriate name for it than Median.[1] He thought some of its peculiarities might be explained by comparison with the Georgian, which, when time permitted, he proposed to undertake.[2] He suggested that it was the language of the aboriginal race whom the Aryan Medes had conquered, and whose settlements reached at least to Behistun, where an inscription had been found without the Persian translation, apparently indicating that it was locally comprehensible.[3]

When Rawlinson had finished his Persian Memoir he devoted himself to a more elaborate study of the Median, and he appears to have nearly completed an essay upon the subject. Meanwhile, however, he was drawn from this branch of inquiry to the more attractive and useful study of the Babylonian column: and his work on Median was never published.[4] He did not, however, lose his interest in the subject. He handed over his copies and other materials to Mr. Norris, who undertook the investigation of the subject and to whom he continued to give valuable assistance as occasion arose.

The study of Median was taken up in the meantime by Dr. Hincks from the point where it was left by Westergaard and Rawlinson. Hincks's contribution is contained in three papers read before the Irish Academy

[1] *J. R. A. S.* x. 20, *note.*

[2] Westergaard was also struck by the similarity of the Georgian plural affix 'bi.' Copenhagen edition, pp. 300, 305.

[3] *J. R. A. S.* x. 37.

[4] *Ib.* vol. ix. Report, 1846, and Report, May 1848.

between June 1846 and January 1847; and the last two appeared after he had seen the opinions of Rawlinson to which we have referred.[1] These papers were communicated without delay to the Asiatic Society in London, as we learn from a note by the Secretary, who says he had just received (June 1846) a communication on the Median cuneiform from 'a learned clergyman in a remote part of Ireland.'[2]

Hincks differed in some material points from Westergaard. He would not admit the long vowels, and limited them to *a*, *i* and *u*, adding, however, *er* to their number. He restricted the simple consonants to *m*, *p*, *t*, *k*, *s*, and *n*; and from these he thought all the other signs were combined. He rightly admitted the compound syllabic form, consisting of two consonants joined by a vowel, which Westergaard had overlooked, and he even allows the occasional use of a double syllable, such as 'ersa' and 'washa.' He showed that the vowel is never omitted, though not always necessarily pronounced. Thus the group 'an-na-ap' reads simply 'anap'; and he did not consider that the simple consonants preceding its syllabic form altered the sound as Westergaard had suggested.[3] Hincks adopted the eighty-two signs distinguished by Westergaard, and attempted the identification of sixty-seven, or seven more than Westergaard. His identification of the three vowels, *a*, *i* and *u*, was correct: and his limited number of consonants were also correct so far as they went, with the exception of *p*, which is the syllable 'pir' (No. 40). He, however, allotted more than one sign to some of his consonants: thus *k* is represented by three signs, *t* by

[1] In his last paper he made several corrections in the values of the letters (*Trans. R. I. Acad.* xxi. 241) which Menant has not taken into account in his Table. *Les Ecritures cunéiformes* (second ed. 1864), p. 138.

[2] *J. R. A. S.* vol. ix. Report, 1846, p. xvii.

[3] *Transactions*, ib. pp. 125–28.

two ; and conversely he allowed that several characters might express the same value. He accepted fifteen of Westergaard's correct syllabic values and added nine of his own, to which we may add fifteen others nearly correct, or thirty-nine in all ; thus, including his three vowels and five consonants, he had forty-seven signs available for transliteration, as opposed to the twenty-nine of Westergaard. Singularly enough he made little improvement in the misleading syllabic signs of his predecessor. Some of them, indeed, he made considerably worse, and added others of his own, so that, notwithstanding a few corrections, their number rose to seventeen. He, however, pointed out that there was a determinative before the words for 'god,' 'Ormuzd' and 'heaven,' contrary to the opinion of Westergaard ; and that the group the latter had mistaken for the vowel *a* was precisely that sign. He was less successful in his classification of the language, which he could not accept as Scythic. He considered its affinity was with the Aryan family, but he could not find that any of the Indo-European languages had similar inflections.[1]

A few years later De Saulcy wrote two articles in the 'Journal Asiatique' on the Median, without, however, making any important contribution to the subject.[2] His papers deserve notice chiefly on account of his eminence in other departments of study, and because he was the only Continental writer whose attention was directed at that time to this special branch of inquiry.[3] He thought he could recognise that it bore a close relationship to Persian, sufficient to justify the opinion of Strabo that the two languages were the same. Both

[1] *Transactions*, ib. p. 129. *J. R. A. S.* xii. 483.

[2] *Journal Asiatique* (4e série), vols. xiv. xv. August 1849, May 1850.

[3] De Saulcy was distinguished for his success in reading the Egyptian demotic character, which Mohl regarded as the greatest achievement since Champollion (*Rapports Annuels à la Société Asiatique*, 1844, p. 36).

Westergaard and Rawlinson had already observed that some of its grammatical forms and vocabulary could be best explained by reference to the modern Georgian and Turkish; and De Saulcy, notwithstanding his opinion of its affinity with Aryan, fully recognised that it had left traces in other quarters, including Kurd, Mongol, Armenian and the Gipsy tongue, but nowhere to a greater degree than in Turkish. He supports his opinion with a wealth of illustration drawn from these sources that must have fairly distracted his printer, and the indiscriminate use of the mechanism of philological dictionaries has in fact led the writer into many serious errors. He does not refer to Hincks, and notwithstanding all the resources at his command, he has fallen far short of the Irish writer whose country rectory was ill provided with these artificial appliances. De Saulcy has not, in fact, added a single correct value to those already known, and has failed to recognise several already established as correct. The utmost generosity cannot concede to him the possession of more than twenty-one correct values and nine nearly correct, all previously known; so that he had not more than thirty available for transliteration, as opposed to the twenty-nine of Westergaard and the forty-seven of Hincks. But he introduced a host of errors that are wholly his own. He assigned no less that thirty values that are absolutely wrong, although he only attempted sixty-two out of the eighty-two in Westergaard's list. But it is not only in the details of decipherment that he went astray; his error covers the whole conception of the structure of the language. He has no less than fifteen different signs for vowels representing many fantastic gradations of sound. Different modifications of *a* and *ou* monopolise each three signs, besides the concession of one each for *hou* and *ô*. A simple *u* is not

suffered to appear; but *ha*, *he* or *e*?, *ya*, *aï*?, and *oui* are classified among the vowels. Some difference still exists as to the treatment of the vowels. The latest authority limits them to *a*, *e*, *i* and *u*, and excludes *o*.[1] M. Oppert ranks *a* or *ha* among the consonants; and in addition to *e*, *i* and *u* he admits *o* and such sounds as *yi*, *ya*, *ah* among vowels.[2]

But it is in the treatment of the consonants that De Saulcy has most departed from the earliest and the latest scholars. He fully admits the syllabic character of the language, but he has done the utmost under the circumstances to conceal this peculiarity.[3] In his list the only sign that appears in syllabic form is the semi-vowel *ar* attributed to a defective sign (No. 10), and the eye already accustomed to the appearance of syllabic combinations is struck by the singular bareness produced by purely alphabetical letters. He admits altogether twenty-one distinct consonantal sounds, of which fourteen are 'quiescent' or simple consonants, and each is represented by one sign only, except *m*, *w*, to which three are allotted. He allows six gutturals to a language that has at most but two, and fills the other classes with scarcely less profusion. He recognises that the signs for *m* and *w* are interchangeable, and that *d* and *t*, as well as *b* and *p*, have several signs common to both; but he gives both *p* and *t* the exclusive use of others; and *dè* and *dh* have each a sign reserved to themselves. His consonantal sounds are given different signs according as they are supposed to be followed by *a*, by *e* or *i*, and by *o* or *ou*, an idea no doubt suggested by the restricted use of the same principle in Old Persian. These letters may be said to be practically syllabic signs, as they are

[1] Weisbach, *op. cit.* p. 47.
[2] *Le Peuple et la Langue des Mèdes* (1879), p. 41.
[3] *Journal Asiatique*, xiv. 103, xv. 527.

only used in conjunction with a vowel; but in reality the classification involves serious error. It is now admitted that, with few exceptions, the same sign never conveys the sound of more than one vowel, and in the isolated cases where it occurs it is generally at the end of a word. In the whole Syllabarium of Weisbach there is only one instance where the same sign is given an optional sound of *pe*, *pat*, and in that of Oppert there are only three where *a* can be exchanged for *i*.[1] In neither authority is there a single instance where *e* and *i* are interchangeable. It is therefore a fundamental error of the gravest character to represent the same sign as systematically employed to express either of two vowel sounds, even if the two selected were ever interchangeable. It is, moreover, doubtful whether there was any difference allowed between the sounds of *o* and *u*, except in the attempt to express foreign words. De Saulcy's system also excluded the compound syllables when two consonants are divided by a vowel. While Hincks did good service in adding a third determinative to the two acknowledged by Westergaard, De Saulcy actually refused to admit the determinative character of the horizontal wedge, and thereby reduced the number to one. On the other hand, he thought he had detected a sign to indicate the plural, which is in fact nothing but the syllable *sin*.

Perhaps the most useful contribution he made was the remark that, while a few of the Median signs bore a certain resemblance to those of the same value in Persian, the larger number of them were actually 'identical' with the Assyrian.[2] It must be confessed that it was long

[1] Weisbach, *op. cit.* p. 47. Oppert, Nos. 52, 77, 88.

[2] *Journal Asiatique*, xiv. 212: 'Que certains signes de l'écriture médique avaient une assez grande ressemblance avec les signes Persans de même valeur, mais que la plupart d'entre eux étaient identiques avec des signes de l'écriture Assyrienne.' Hincks had already pointed out, in 1845, that there were many characters common to both (*Trans. R. I. Acad.* xxi. 131);

before this identity was detected, and even such a practised copyist as Westergaard declared that the five different species of cuneiform writing then known 'differed from one another in the shape of nearly every letter or group,'[1] and considerable practice is still required before their identity can be brought home to the eye. The similarity—to employ a less emphatic expression—proved, however, of great assistance in enabling future inquirers to fix the value of the signs. Some time had yet to elapse before they could take advantage of this discovery, for when De Saulcy wrote, the Assyrian characters were themselves still undeciphered.

De Saulcy's work was criticised by Löwenstern in the 'Revue Archéologique' (1850), where he sought to trace the affinity of Median to the Aramaic branch of the Semitic family, while he admitted that some of the endings might be traced in Pehlevi and New Persian. He did not consider it to be the Median language, which, he maintained, is properly represented by Zend; and he suggested, as Mr. Rich had done before, that it might have been the dialect of Susa.[2] Holtzmann fully recognised that it contained Semitic elements, but still he considered that it should be regarded as the mother of Pehlevi; and he subsequently added that it was probably the language of the court at Susa.[3] Still the opinion of

and in June 1849 he added that a 'very large proportion of the Median characters can be identified with Assyrio-Babylonian characters, having nearly the same phonetic values' (xxii. 4). Westergaard thought the writing originated in Babylon, 'whence it spread in two branches, eastward to Susiana and northward to the Assyrian Empire, from whence it passed to Media, and last to ancient Persis' (p. 273, Copenhagen edition). He thought the Median bore most resemblance to Assyrian writing, and Persian to Babylonian writing (*ib.* p. 272; *cf.* Bonn edition, p. 4).

[1] Copenhagen ed. p. 271.

[2] Weisbach, p. 7; Mohl, *Vingt-sept ans d'Etudes*, i. 419; *Athenæum*, July 6 and September 7, 1850. *Cf.* above, p. 194.

[3] Holtzman's essays appeared in the *Zeitschrift D.M.G.* between 1851 and 1854. They are reported by Weisbach and Mohl, *loc. cit.*

its Scythic origin, first suggested by Westergaard and Rawlinson, continued to gain ground, supported, no doubt, by the numerous similarities to this linguistic stock that were pointed out in the learned Memoirs of De Saulcy. In 1852, M. Oppert, writing on the Persian column, went so far as to propose to drop the designation Median altogether, and, following the suggestion of Rawlinson, to substitute 'Scythic.' At that time he considered it to be the language of the hordes who overran Western Asia, and who, after twenty-eight years of domination in Media, were finally expelled by Cyaxares. It must be admitted that they were fortunate to leave such a permanent memorial of their passage.[1]

A more important contribution than any of these was made by Luzzato, who showed with sufficient clearness that twenty-four of the Median signs corresponded to the Babylonian (1850).

Down to the time we have now reached the progress made was disappointing. We have seen that much speculation was indulged as to the affinity of the language and the people to whom it should properly be attributed; but very little knowledge of the language itself had been acquired. Dr. Hincks had read forty-eight signs with sufficient correctness, and De Saulcy thirty-one, out of the one hundred and eleven with which the language is written; but both scholars were encumbered by the multitude of unknown or erroneous values. In 1852, however, a considerable step was made in advance. On July 3 of that year, Mr. Norris read a paper to the Asiatic Society on the result of his study of the Median column of the Behistun inscription with which Colonel Rawlinson had entrusted him; but the essay did not appear in the Journal in its completed

[1] *Journal Asiatique* (4e série), xvii. 541. Cf. *Les Mèdes*, p. 2.

form till 1855. The much greater diversity of material at his command enabled him to dispose of many difficulties that had obstructed earlier scholars. In the first place, he was able to increase the number of signs from the eighty-two that had puzzled his predecessors to one hundred and three, and to all of these he endeavoured to assign values. He was successful with fifty-seven, and twenty-one others were sufficiently correct for purposes of transliteration, making a total of seventy-eight in addition to two determinatives. One other sign has not even yet been satisfactorily settled,[1] and he still had twenty-four incorrect values. Unlike many decipherers, however, he was able to distinguish the gradations of certainty attaching to the values he assigned. Those that appear in his list allied to any vowel other than *a*, *i* or *u* are to be regarded as questionable. He estimated their number with tolerable accuracy at about twenty. He fully recognised the true syllabic character of the language. 'Each character,' he says, 'represents a syllable which may be either a single vowel or a consonant and vowel, or two consonants with a vowel between them.'[2] He has, however, given six signs in his list a purely consonantal value, *m*, *r*, *s* and *t*, the two latter being each represented by two signs.[3] Four of these are correct, but the second signs for *s* and *t* are both wrong. He limited the vowels to *a*, *i* and *u*, but he has also allowed *e* to appear in his list, because he found a sign in Median that corresponds exactly

[1] Norris, No. 97; Weisbach, No. 108.

[2] *J. R. A. S.* xv. 5.

[3]

m	Norris, No. 58	Weisbach, No. 57
r	„ „ 78	„ „ 61
s	„ „ 90	„ „ 45
s	„ „ 94	„ Determinative
t	„ „ 38	„ No. 50
t	„ „ 43	„ „ 42 *at*

to the Babylonian for that letter, and it is now admitted as correct. He reckoned eleven initial consonantal sounds: they include the consonants already named with the exception of *m*, together with *th*, *ch*, *p*, *k*, *v*, *l*, *n* and *y*. With these united to one of the three vowels all the syllables in the language are formed. The double syllables are composed of the same consonantal sounds (excluding *th* and *y*), separated by *a*. He did not consider that any of the signs represented the union of two consonants separated by *i* or *u*, an opinion that has been since over-ruled. He recognised that there was no difference between the surd and sonant consonants at the beginning of a word, and he agreed with Westergaard that the double letter in the middle emphasised the hard sound. He saw also that the same sign was used equally to express the Persian *m* and *w*; and that 'the aspirate, which is quite uncertain, must also be disregarded.' He accepted the two determinative signs already admitted by Westergaard, and also the determinative before the words for 'god' and 'heaven' which had been pointed out by Hincks.[1] He also recognised the ideogram for 'month.' The gradual recognition of the similarity of a large number of the Median and Babylonian signs was at length beginning to bear fruit. Norris indicates a resemblance between nearly fifty in his list of one hundred and three signs.[2] Twenty of these are indeed 'identical' in form, and independent investigation proved that they conveyed the same sound in both languages. In the others the similarity was sufficiently striking to afford an important confirmation of the values arrived at by the study of the text. Indeed

[1] He attributes this observation to Holtzmann, who wrote in 1851; but Hincks's opinion was published three years previously in the *Trans. R. I. Acad.* 1848. Norris had heard of De Saulcy, but did not read him; see *J. R. A. S.* xv. 153, *note*.

[2] We have counted 47, *ib.* pp. 7–46.

in a few cases—such, for example, as the *e* already mentioned, the similarity to the form of a Babylonian character was the only clue to the value of the Median sign.[1] If he had allowed himself to be more influenced by the Babylonian script he would have slightly increased the number of his correct values;[2] though, on the other hand, a too rigorous adherence to this rule might have landed him in some errors. He hazarded the important statement, subsequently so remarkably confirmed, that there are evident signs that the syllabarium had been originally devised to express a Scythic tongue,[3] for, he said, 'the unchangeable roots, the agglutinative structure and the simple syllabisation of such tongues are perfectly suited to such a mode of writing, while the Semitic and Indo-Germanic cannot without the most awkward and unsystematic arrangements be represented by it.' He considered that the language of the second column must have been that of the pastoral tribes of Persia; and he pointed out that the omission from the Median text of the names of the districts in which Otiara and Rhages are placed showed that those towns were well known where the language was spoken, and it also afforded some evidence of the area it covered. On the other hand, the discovery of Scythic inscriptions at Susa seemed to point no less emphatically to its southern range, and the possibility presented itself that that was the source from which it spread. De Saulcy farther showed that a close analogy might be traced to Turkish; but Norris was the first to point out that its nearest modern relationship is with the Volga-Finnish branch of the Scythic

[1] See also Nos. 67, 74 (Norris's list).

[2] For example, Nos. 17, 35, 58.

[3] Oppert takes the credit of this to himself: 'Depuis 1851, j'avais entrevu l'origine touranienne de l'écriture cunéiforme' (*Les Mèdes*, p. 5), but he acknowledges that Norris had suggested it.

family, and that it bears a close resemblance to the language now spoken by the Finns.[1]

He was the first to treat the grammar systematically. He pointed out with sufficient accuracy the case-endings of nouns,[2] and explained that, in common with Finnish, they distinguished more cases than the Indo-European languages, such as the allative and the locative. He showed that there was no distinction of gender, and that the adjectives had the same case-endings as the nouns. He explained that the plural was formed by the addition of *pa* (which, however, ought to have been *p*, *pe*, or *ip*), and that the case-ending was suffixed to it. He distinguished the pronouns with tolerable correctness, and showed their relationship to the Tartar languages. He also proved that the analogies with these languages are more obvious in the verb than in the other parts of speech.

He has given an admirable transcript of the Median text of the Behistun inscription in eight plates, accompanied by a transliteration that shows a remarkable improvement on all previous efforts, though of course it has since undergone considerable alteration. His translation follows the rendering of the Persian column made by Rawlinson, and has received little alteration from later scholars. He brought his essay to a close by giving the Median transliteration and translation of the remaining inscriptions, including two that were lately found by Mr. Loftus at Susa, and which now appear for the first time. The unilingual at Persepolis was at length intelligibly rendered. Westergaard had made out its general purport; but even this imperfect result

[1] M. Oppert claims to have suggested in 1847 that Median belongs to the 'Finno-ouralienne' race (*Expédition*, p. 82). He has not given any reference, and we know of no writing of his of that date except the tract already reviewed: and this opinion does not appear to be stated there.

[2] Cf. *J. R. A. S.* xv. 63; *cf.* Weisbach, p. 49.

escaped the efforts of De Saulcy.[1] The last paragraph was, however, found one of unusual difficulty, and Norris suggested two alternative versions:

1. 'Ormuzd, protect me, with all the gods, and also this fortress. Moreover, do not doubt that those confined in this place are wicked men;'

or

2. Ormuzd, protect me, with all the gods, and also this fortress and what is enclosed therein. This do not doubt that the wicked men will be punished.'

In 1879, Oppert reads the same passage:

'Que me protège Ormazd avec tous les Dieux, et cette forteresse, et aussi ce qui est dans cette forteresse. Que jamais je ne voie ce que l'homme méchant souhaite [que je voie]!'

The latest attempt was made by Weisbach, in 1890, and runs thus:

'Mich möge Ahuramazda mit allen Göttern schützen, und diese Festung, und wiederum zu diesem Platze . . .! Das möge er nicht sehen (?), das, was der feindliche Mann ersinnt!'[2]

The work of Norris excited some controversy, and Holtzmann was especially concerned to refute the Finnic-Tartar hypothesis. M. Haug revived the theory of its closer relationship to Turkish, proposed by De Saulcy, and he suggested that the Persians themselves were originally Tartars.[3]

[1] *Cf.* Westergaard, Bonn edition, p. 113; *Journal Asiatique*, xv. 426.
[2] Cf. *J. R. A. S.* xv. 149; *Les Mèdes*, p. 197; Weisbach, p. 77.
[3] Mohl, *op. cit.* vol. ii. Report, June 1855; Weisbach, p. 7.

M. Oppert had now become the chief representative of cuneiform studies upon the Continent. His essays on the Persian column of the inscriptions (1851–2), evinced a complete mastery of the subject and considerable independence in the treatment of doubtful passages. The reputation he had earned led to his being attached to the French scientific expedition to Babylonia. On his return he undertook to write an account of the expedition, and his second volume, which made its appearance in 1859, contains an elaborate account of the work of decipherment.[1] Although the book is chiefly concerned with Assyrian, he has given a Syllabarium of the Median, with the object chiefly of comparing it with the Babylonian and Assyrian systems of writing.[2] The great importance resulting from such a comparison now becomes apparent. The values of the Assyrian signs were already ascertained in a large number of cases, and it was recognised that, with some exceptions, the similar sign in Median generally expressed the same value. The principle was also definitely admitted that each sign has only one value,[3] and that an independent sign may be looked for to express the combination of the vowels *a*, *i* and *u* before and after each of the principal consonants, *k*, *p*, *t*, *m*, *r*, *l* and *s*, and therefore we may expect a sign for each of such forms as *ka*, *ki*, *ku*, *ak*, *ik*, *uk*, and so on. The application

[1] *Expédition scientifique en Mésopotamie* (1851–4), par Jules Oppert, vol. ii. Paris, 1859.

[2] M. Oppert cannot always be taken seriously where his own claims are concerned. Writing in 1859, he says of the Median: 'Tous nos devanciers, y compris M. Norris, l'ont prise pour une écriture distincte de celle des Assyriens' (p. 71). Leaving out of account Norris's identification of 47 of the characters, De Saulcy had pronounced them to be 'identical' in 1848. Oppert now compares 97 Median signs and 8 ideograms with both Babylonian and Assyrian groups.

[3] 'Deux caractères n'expriment jamais le même son,' p. 35. 'Les mêmes sons syllabiques sont toujours attachés au même signe,' p. 77.

of this system enabled Oppert to make a very decisive improvement in the Syllabarium. It will be recollected that Norris had twenty-four wrong values, and twenty-one only approximately correct. Oppert now corrects twelve of the former and eighteen of the latter. The result was that he could dispose of eighty-three values absolutely and six nearly correct. He was doubtful as to the sound of one, wrong as to seven, and he omitted seven. Thus, when the determinatives are added, all of the 106 signs in Menant's list were deciphered except fifteen. He also added a fourth to the list of determinative signs. He showed that the one mistaken by Norris for *s* was in fact used simply to indicate that the following letter was an ideogram (No. 66 of Hincks). It had long ago been observed that a single sign was employed for 'king,' and Norris added another for 'month.' Oppert points out that the determinative before 'god' was also an ideogram for 'god,' and that 'man,' water,' 'animal, or 'horse' and 'road' were likewise indicated by ideographic signs. He considered that the grammatical forms show analogy first to Magyar, then to Turkish, Mongol and Finnish. He gave it the name of Medo-Scythic, and he now considered that it was spoken by the tribes at Persepolis and Behistun—more particularly by those in the north of Media. The student of the second column had at his command some ninety-nine proper names, besides a large number of Persian official terms and titles transliterated into the Median script; and with their assistance the pronunciation of about a hundred and forty words was already known.

The remarkable success of Oppert was due almost entirely to the successful comparison of the Median and Babylonian signs; and it had something of an accidental character, for it appeared in a work chiefly devoted to

Assyrian and without special reference to this particular branch of the subject. Indeed the attention of scholars was now so thoroughly absorbed by the study of Assyrian and the many new discoveries it opened to their view, that the second column fell into comparative neglect. Mordtmann wrote papers upon it in 1862, and again in 1870, in the 'German Oriental Gazette,' in which he appears to have ignored the results already attained, and to have given different values to some of the signs. He called the language Susian, in consequence of the order in which the provinces of 'Persia, Susiana and Babylon' occur in the Behistun inscription, and also because Susa bears an entirely different name in the Median from that given to it in the Persian, while the other names are alike in both. In support of his opinion he was the first to show that the inscriptions on some bricks found at Susa, which were then beginning to attract attention, though written in a different dialect, were evidently similar in speech and writing to the second column.

It will be recollected that Rawlinson visited Susa in 1836, and observed a few bricks and a broken obelisk bearing the peculiar inscriptions to which we have just referred. He considered the style of writing to be 'the farthest removed of any from the original Assyrian type,' and he surmised that the language is 'not even, I think, of the Semitic family.'[1] In 1852, Loftus collected a few other inscriptions in the same character and language, which were sent to Rawlinson. Mr. Norris, who announced this acquisition in his Median Memoir, stated that Rawlinson still thought that the characters were those of 'the Assyrian alphabet,' but in a different language, and that he had made out sufficient to show that they belonged to Susian kings who were anterior to Darius.[2]

[1] Bonomy, *Nineveh and its Palaces* (1889), p. 479; *J. R. A. S.* xii. 482.
[2] *J. R. A. S.* (1855), xv. 97; *Memoir* by Canon Rawlinson, p. 174.

When Mr. Layard visited the same neighbourhood, in 1841, he was fortunate enough to be able to copy two inscriptions at Malamir, one of thirty-six lines and the other of twenty-four.[1] Rawlinson, in his classification of the cuneiform inscriptions, called them the Elymaean, and from the differences they presented, he considered that they 'are entitled to an independent place,' apart from Babylonian or Assyrian. In 1850, he again points out their dissimilarity from either of the two last mentioned, but he adds that they are not so difficult to read as those he had found on the bricks at Susa.[2] The surprising discovery of De Saulcy that the Median and Babylonian characters are 'identical,' notwithstanding their apparent diversity, naturally stimulated the ingenuity of other writers to widen the sphere of the 'identical'; and Mordtmann was among the first who laboured in this direction. The work was continued by Lenormant, who made his appearance within the circle of cuneiform scholars in 1871, by the publication of his first series of 'Lettres Assyriennes,' followed, in 1873, by the 'Choix de Textes.' The result of the minute comparison he instituted was to show that the Old Susian script closely resembled Old Babylonian, while the Elymaean of Malamir is simply an earlier form of the Median or New Susian character. The development towards 'identity' had now gone so far that Bertin describes the difference between Old Susian and Old Babylonian as very slight, while Elymaean and Median are simple 'variants of the same.'[3]

[1] Layard (Sir H.), *Early Adventures* (1894), pp. 168, 220. *Cf.* Professor Sayce in *Trans. Soc. Bib. Arch.* iii. 172.

[2] *J. R. A. S.* x. 28; *ib.* xii. 483.

[3] 'Development of Cuneiform Syllabary' (1887), *J. R. A. S.* vol. xix. They appeared to Mr. Vaux in 1851 'to contain a considerable number of new characters, for which no conjectural equivalent can be found either in the Babylonian or the Assyrian alphabet' (*Nineveh and Persepolis*, p. 431).

Mordtmann and Lenormant were successful also in showing that both these two newly-discovered languages, or dialects, are closely related to Median, and belonged therefore to the Scythic family. The remarkable discovery that had recently been made that a Scythic language—the Akkadian—was the primitive speech of Chaldaea, gave a very unexpected extension to the range of the Turanian races; and it was now beginning to be recognised that the civilisation of Western Asia is to be referred to them, and not, as heretofore supposed, to a Semitic people. The effect of these discoveries was to stimulate once more the flagging interest in the writing of the second column, and efforts were now directed to determine the nature of its relationship to the newly-found dialects, and more particularly to ascertain the people to whom each might be attributed. The first to enter upon this new field of inquiry after Lenormant was Oppert, who submitted a tentative translation of an Old Susian inscription to the Congress of Orientalists in 1873. In the following year, Mr. Sayce attempted two short inscriptions published by Lenormant. If we may judge by comparison with a later version given by Oppert, no great measure of success was yet attained.[1] Indeed three years afterwards, Oppert himself admitted that the Susian could not yet be read. The inscriptions of Malamir caused less difficulty, and Sayce declared that it was 'the same as the Median with a few unimportant variations.' It must be confessed, however, that his subsequent analysis tended to show that these 'variations' had a considerable range both in grammar and vocabulary.[2]

Meanwhile the language of the second column

[1] *Trans. S. B. A.* vol. iii. (1874), p. 479; *Records of the Past*, O.S. vol. vii. (1876), p. 81.

[2] *Trans. S. B. A.* loc. cit. p. 472.

continued to receive a great variety of names which has produced immense confusion. Lenormant, however, heroically adheres to 'Median,' because one of the Median tribes is specially distinguished as Aryan, and it was therefore reasonable to suppose that the mass of the people were of different, and presumably of Turanian, race. Professor Sayce admits that it must have been 'the vernacular of the lower classes of Persia: in other words, of the Medes'; but he preferred to call it Elamite, 'as less likely to lead to ambiguity and misconception.' He suggests that Amardian would be still better, for Susiana is always called 'Khapirti' in the Median text; and this is evidently the same as the country of the Amardians of Strabo. He showed that its relation to the dialect of Malamir was closer than to that of Old Susian; and he thought there was no doubt that the latter was related to the Akkadian.

One of the most interesting parts of Professor Sayce's essay was the publication of 'a revised list of the powers of the Elamite' (*i.e.* Susian) 'character, which can now be determined by means of the Assyrian syllabary.'[1] Written in 1874, this document illustrates the process of development that occurred between the two works of Oppert, that of 1859 and the one of 1879, to be mentioned shortly. It will be recollected that we left him with seven wrong values, six nearly correct and seven omitted altogether. We find that when Sayce wrote, four of the first and one of the second had been corrected, and three signs omitted by Oppert were now provided with correct, or nearly correct, values. At the same time a plentiful crop

[1] The word 'Assyrian' is often used as interchangeable with 'Babylonian,' especially by French writers. Professor Sayce, although he here lapses into this habit, is careful to explain that 'the form of the character proves that the syllabary was derived from Babylonian, and not from Assyrian as the Armenian.' *Trans. S. B. A.* (1874), iii. 471.

of fresh errors was introduced. Six or seven values, correctly ascertained in 1859, were now rejected and erroneous ones substituted. At least three of the values proposed for the signs omitted by Oppert were very far indeed from the mark. The ideogram for 'horse' was rejected in favour of the syllable *az*, which may have suggested to Weisbach the substitution of 'donkey' in place of the nobler quadruped preferred by Oppert.

The two writers who have brought the knowledge of the Median syllabary to its present standard are Oppert and Weisbach: the former in a special treatise written in 1879 ('Le Peuple des Mèdes') long remained the leading authority on the subject, and his conclusions have in the main derived confirmation from the more recent investigations of Weisbach on the language of the second column, which appeared in 1890. With very few exceptions, to be noticed later, both scholars are in substantial agreement as to the values of the signs; and it is this agreement that forms for the present the standard of right and wrong, by which the efforts of their predecessors have been judged. Both writers were guided to a large extent by the values of the corresponding Babylonian characters.[1] Oppert, as was said, thought he could trace a resemblance between ninety-six of the Median signs and their Babylonian equivalents. In each case, the sound as well as the form of the character was appropriated. Weisbach is much less struck by the general application of this law. He fully admits the strong similarity of many of the signs, but some have, he says, so far diverged from their original types as to be hardly recognisable. Others, he thinks, were borrowed from New Assyrian, and a few from older forms. Indeed he is, on the whole, indisposed to derive the syllabary direct from

[1] Menant, *Les Ecritures*, p. 137.

the New Babylonian. He thinks it is more properly to be traced through the writing of Malamir to the Old Susian, and the development from the Old Babylonian of the latter was a parallel and independent process similar to that which produced the New Babylonian. But as the Old Susian character has not yet been sufficiently investigated, he restricts his comparison to the New Babylonian, and he points out some of the principles that were followed in the evolution of the new script. For example, the vertical wedge that crosses the horizontal in the Babylonian is generally placed before them in Median, and the same rule applies to the horizontal crossing the vertical. There is an evident effort to simplify both the writing and the language. The signs preserve the same signification in both, but when it happens in Babylonian that the same sign has many different values (sometimes no less than nine) it has never more than two in Median. So also the number of homophones, or different signs with the same values, are strictly limited. Indeed, he considers that the Median was an early effort to approach an alphabetical system.[1]

We have seen that several of the errors made by Oppert in his list of 1859 were corrected from various sources before 1874.[2] He was still left with three wrong values, five only nearly correct and four omitted altogether. Of the first class he now gives one a value that accords with that of Weisbach—11^{b}, 'ko' for 'kam,' the 'gau' of Norris and Weisbach.[3] Of the

[1] Weisbach, *Die Achaemenideninschriften Zweiter Art*, pp. 25–27.

[2] *Trans. S. B. A.* vol. iii., article by Prof. Sayce 'On the Cuneiform Inscriptions of Elam and Media,' p. 465.

[3] *Cf.* Oppert, *Les Mèdes*, p. 41; Weisbach, p. 33. With regard to the other two, he now omits No. 21, to which he had formerly assigned 'kam'—the 'zis' of Weisbach (No. 25). The other, 71^{b}, he changes from 'tu' to 'kin,' the 'en' of Weisbach (No. 109).

second class he corrects four,[1] and he supplies correct values to three of those previously omitted.[2]

He now presents us with a list of a hundred and twelve distinct signs, and no less than fifteen ideographs; but when their syllabic values are also known the majority are included in the hundred and twelve signs. Four, however, appear among the ideographs for the first time, and raise the total number of signs to a hundred and sixteen. Six of these are,[3] however, repeated twice over to express different syllabic values, thus reducing the number of distinct signs to a hundred and ten. He accepts a hundred and five of the hundred and six signs that were already known, rejecting only one (No. 21). He completes his number by the addition of five other signs,[4] of which Weisbach has accepted three. With these two exceptions, the whole of Oppert's signs are to be found in Weisbach: that is, a hundred and eight out of the hundred and ten. Weisbach, however, includes in his list the No. 21 of Hincks, omitted by Oppert.

The two writers are also substantially agreed as to the values of the signs. Of the hundred and six given in Menant's list, we find they differ only as to seven.

[1] These are: 16, 'ni' to 'ne'; 34, 'ta' to 'te'; 75, 'ha' to 'a'; 77, 'nu' to 'ni.'

[2] 16^a, 'çi'; 39^c, 'mak'; 60^a, 'tin.'

[3]
No. 5	appears as	Nos. 9	and	56.
No. 28	„	Nos. 18	„	69.
No. 25	„	Nos. 29	„	76.
No. 16^a	„	Nos. 60	„	94.
No. 26	„	Nos. 80	„	81.
No. 68	„	Nos. 91	„	101.

[4] These are:

Oppert No. 35, 'mu'	=	Weisbach No.	5.
„ No. 66, 'iz'	=	„ No.	33.
„ No. 107, 'race'	=	„ No.	82.
„ No. 49, 'la'	Not in Weisbach.		
„ No. 109, 'paz' (animal)	Not in Weisbach.		

Of these, two are omitted by Oppert[1] and one by Weisbach.[2] In four cases only have they arrived at absolutely contradictory values.[3]

The discovery announced in 1859 of a determinative sign to indicate that the one preceding it should be read ideographically led to the identification of a number of signs to which ideographic values may be attached, and their number is raised from the seven known in 1859 to sixteen. The ones now added by Oppert are 'town,' 'mountain,' 'race,' 'arch' (a window), 'sea,' 'house,' 'head,' 'ship,' 'camel'; and Weisbach has since contributed a fifth determinative which, he says, is placed before articles of wood.[4]

The difficulty of the transliteration is greatly enhanced by the fact that the same sign represents both *m* and *w*, and the three gradations of sound—the surd, aspirate and sonant—are not distinguished by separate signs. It is therefore impossible to say in many cases whether to transcribe *m* or *w*, *k* or *g*, *p* or *b*, *f* or *d*; and Oppert has enumerated no less than six different modifications of sounds—*č* (*tch*), *ǧ* (*dj*), *ž*, *ts*, *dz*, and *z*—that are all represented by a single sign.[5] Weisbach points out that *g*, is only clearly distinguished from *k* when it occurs before *i*. The Median *z* represents the Persian *z*, *c*, *j*, and the Babylonian *s* (and *o* ?); the *r* and *n* are sometimes found to be interchangeable. When the sound cannot be checked by its occurrence in a proper name, Oppert generally adopts the hard sound; but he allows

[1] Namely, No. 21, which Weisbach values as 'zis' No. 25. No. 20 Oppert includes among his signs, but cannot find its value. In Norris it is 'kwe.' In the list given in Sayce's article it is 'khub.' Weisbach gives 'kup (?)' No. 29.

[2] Weisbach fails to find a value for 71ª, to which Oppert gives 'nu' (No. 41).

[3] No. 35 Oppert 'git,' Weisbach 'am'; 39ᶠ Oppert 'mun,' Weisbach 'tum'; 71ᵇ Oppert 'kin'; Weisbach 'en'; 76 Oppert *o*, Weisbach *u*.

[4] Weisbach, *op. cit.* p. 33.

[5] Oppert, *op. cit.* p. 30.

himself a certain latitude in the application of this rule, and he shows a decisive preference of *w* to *m*. Weisbach follows the uniform practice of transcribing the gutturals, dentals and labials by the tenues; he always uses *z* for the Persian *c*, *j* and *z*, and for the Babylonian *z* and *s*; and, contrary to Oppert, he prefers *m* to *w*.

Oppert recognises the five vowels *a*, *e*, *i*, *o* and *u*; and, following De Saulcy, he admits *yi*, *ya* and *ah* in his list, among vowels. Weisbach excludes the *o*, for he considers there was no difference of sound between it and *u*; the *y* he includes among the semi-vowels, with both *r* and *l*. Although Oppert found that all the five vowels follow the consonant to form the single syllable, he considered that only *a*, *i* and *u* precede it. Both writers agree to limit the consonantal sounds to about eleven. Oppert was the first to treat the grammar with elaborate care, and when he claimed that his work was 'une création entièrement nouvelle,' the statement was probably more strictly accurate than he imagined.

The nouns do not admit of any distinction of gender, and have only the singular and plural number. Oppert distinguishes no fewer than twelve different cases, indicated by suffixes, a profusion limited by Weisbach to eight, viz. nominative, genitive, accusative, dative, ablative, allative, locative and comitative.

Oppert, however, did good service in unravelling the mysteries of the verb, though his passion for systematising and 'restoration' has carried him too far; and his verb, declined through all its moods and tenses, presents a very different appearance from the skeleton which, according to Weisbach, is all that can be strictly collected from the texts themselves. For example, we are presented with the six persons of a

complete past tense, where Weisbach can only find authority for three; and we get a complete imperfect, although only one termination is really known, viz. that of the first person singular. With no less confidence we find two verbs—a reciprocative ('je me sus'), and an 'intensive' ('savoir bien')—of which Weisbach can see no trace; and the same remark may be applied to his desiderative ('je veux savoir') and his factitive ('je fais savoir').[1]

Both writers agree as to the personal pronouns; but in the possessive Weisbach can only find the third person singular and the first person plural, while Oppert supplies us with the series complete.[2]

Weisbach calls attention to the dialectical differences in the Naksh-i-Rustam inscriptions, and to the evidence of decay visible in the language of Artaxerxes at Susa.

For the reasons already mentioned there is considerable diversity observable in the transliterations made by the two writers, but so far as we have observed they are in substantial agreement with regard to the meaning of the text, as may be seen by a comparison of their rendering of the unilingual inscription.[3] Occasionally, however, Weisbach finds himself unable to follow the more imaginative flights of his predecessor. He will have nothing to do with the 'restoration' of the concluding paragraph of the Suez inscription of Darius.[4] He is equally unable to accept the interesting completion of the detached inscription at Behistun, marked L by Norris. Norris reads: 'I made another tablet in the Arian language, such as did not exist before, and I made a large . . . . and a large . . . . and . . . . and . . . .' This not very promising

[1] Oppert, pp. 77, 81–4. Weisbach, pp. 51, 53.
[2] Oppert, p. 62. Weisbach, p. 50. [3] Oppert, p. 196. Weisbach, p. 77.
[4] Oppert, p. 215. Weisbach, p. 79.

attempt is perfected by Oppert as follows: 'I have made also elsewhere a book in Arian language, that formerly did not exist, and I have made the text of the Divine Law (Avesta) and a commentary of the Divine Law and the prayer and the translation.' He observes truly that 'the passage is of first-rate importance,' and he adds encouragingly: 'The explanation which I give is sure.' It is therefore somewhat disconcerting to find that the latest writer cannot get much beyond the crudity of Norris. Weisbach reads: 'Machte ich Inschriften in anderer Weise (?) (nämlich) auf Arisch, was vormals nicht war, und das grosse . . . . und das grosse . . . . und das . . . . und das . . . . machte ich.' Alas for the Divine Law and the commentary and the prayers![1]

We have already said that in 1859 Oppert had abandoned the hypothesis that the language of the second column was introduced by the Scythic hordes who were expelled by Cyaxares. He recognised that it was connected with the ancient Akkadian, and could not, therefore, be a new importation, but an original native dialect. He considered that the Median name itself is Turanian and related to 'Mada,' the Akkadian for 'land.' He thought it is clear from Herodotus that the six tribes who composed the Median nation were not all of the same origin. The dominant caste were, he still held, of the same Indo-European race as the Persians, but a large part of the population were Turanians, and the language of the second column was that of the agricultural and nomadic tribes of Media, especially those of the north. He accordingly

[1] Norris in *J. R. A. S.* xv. 145; Oppert, *Records of the Past*, vii. 109. Cf. *Les Mèdes*, p. 155; Weisbach, p. 77. See also the surprising expansion into 'the future life,' Col. IV. par. 7 (*Les Mèdes*, p. 149), which, however, he softens in the English version to 'May I die as a Mazdean' (*Records*, loc. cit. p. 106). *Cf.* Weisbach, p. 73. par. 46, line 99.

gave it the name of Medo-Scythic to distinguish it from the Aryan Median of the classical writers.

This very tenable hypothesis he, however, abandoned in its turn, and advanced one much more hazardous. He relies upon a fable of Herodotus to show that the Aryans occupied the country from a much earlier period than has been commonly supposed, and did not, therefore, make their first appearance with Dejoces. Both Aryans and Turanians, he now thinks, were long settled together in the same country, and it is impossible to say which of the two were the first comers, though he inclines to give precedence to the Aryans. The various tribes were upon an equality, sometimes the Turanian and sometimes the Aryan gaining the ascendency. He considers the former were known as the Medes, a word essentially Turanian in its origin, while the others retained their proper designation of Aryans. He holds that the Median dynasty of Dejoces was Turanian. He carefully analyses the names of their kings, and he has succeeded in affording a fresh illustration of the peculiar power of philology to prove any thesis whatever, when employed by a skilful manipulator. Not many years before, he laid it down as self-evident that these same names were pure Aryan.[1] Now it becomes no less apparent that they are pure Turanian. The dynasty of Dejoces marks the ascendency of the Turanian Medes, and the language of the second column is that which was spoken by them. He accordingly drops his previous qualification of Scythic, and gives it simply the name of Median. The rise of the Persian power enabled the Aryan Medes to recover the position they had temporarily lost, and hence all

[1] 'Nous ne connaissons pas un seul nom propre de Mède qui ne soit Aryan—ceux de Déjocès et d'Ecbatane sont du perse le plus pur.'—1852, *Les Mèdes*, p. 2.

the names that occur from the time of Darius clearly belong to that race. Mada became a geographical name which embraced the whole population of the country now under an Aryan aristocracy, and Herodotus was therefore fully justified in speaking of the Medes and Persians as one in speech and descent. The theory of the Turanian origin of the Median dynasty has been almost universally abandoned.[1] The attack upon it was led by the Jesuit scholar Delattre,[2] and the whole controversy has been ably summarised by Weisbach. Recent writers have thought it so necessary to insist upon the Aryan race of the Median kings that they decline to give to the Turanian language of the second column the name of Median. It has accordingly come into fashion to indicate in an unmistakeable manner the source from which it has sprung. Delattre called it 'Anzanisch,' from the name of the territory ruled by the Malamir kings. Halévy adopted a suggestion made by Mr. Sayce, and calls it 'Amardian.'[3] Hommel speaks of it as 'Susian-Median' and 'Susian,'[4] a term which Weisbach has qualified by calling it New Susian. The more probable opinion seems to be that it was the language of Susa at the time of the Persian conquest, and possibly also of some of the subjugated tribes in Media. The name of Susian is therefore more appropriate than one that might confuse the people who spoke it with the Aryan conquerors of their country. Still it is very far from satisfactory. The great importance of the inscriptions recently discovered in the Old Susian language will tend more and

[1] Sayce seems to be the only noteworthy exception. See *Early Israel*, p. 242.

[2] *Le Peuple des Mèdes*, Bruxelles, 1883.

[3] *Trans. S. B. A.* iii. 468.

[4] Hommel (Dr. Fritz), *Geschichte Babyloniens und Assyriens* (Berlin, 1885), p. 101.

more to reserve to them the designation of Susian; and considerable confusion will arise from its extension also to the language of the second column. The latter may possibly be a descendant of the true Susian, but both in the system of writing and in the language the connection is remote.

The relationship of the Median is now placed almost beyond the sphere of controversy. M. Gobineau, who wrote in 1859, maintained indeed that it was connected with Pehlevi, half Semitic and half Aryan: and M. Mohl still earnestly hoped that we might 'get rid of the Scythic hypothesis and all the complications it involves.'[1] But this desire was not destined to be realised, and its affinity to the Altaic branch of the Turanian family is now admitted. Some doubt is felt as to whether it has left any successor, and which of the modern languages approaches the nearest. Oppert inclines to Turkish:[2] Weisbach is more guarded, and considers that it exhibits marked differences from all the living representatives of its Turanian relatives.[3]

There is little doubt that it and kindred languages were extensively spoken in early times throughout Susiana and the lower valley of the Euphrates down to the Persian Gulf. Its connection with the Old Susian has never been doubted. Lenormant, Oppert, Sayce and Hommel have testified to its more distant relationship with the Akkadian, the primitive language of Babylonia. Weisbach is naturally more sceptical, for in 1890 he had scarcely emancipated himself from

[1] Gobineau, *Lectures des Textes cunéiformes*. He afterwards wrote *Traités des Ecritures cunéiformes*, 2 vols. 1864. Mohl, *op. cit.* Report 1859, ii. 257.

[2] Major Conder also, *J. R. A. S.* (1892), xxiv. 734. He thinks Akkadian is also nearest to Turkish, though Akkadian words survive unchanged to the present day in Finnic-Hungarian and Ugric (*ib.*).

[3] *Op. cit.* p. 46.

the heresy of Halévy, who doubted the existence of Akkadian as an independent language.[1] Sayce and his disciple Hommel added the speech of the Kossaeans to the same group.[2] They were indeed disposed to create a new family of languages which they called Alarodian,[3] and included within it the Elamite, embracing New and Old Susian, Kassite,[4] Hittite[5] and Vannic.[6] They considered that the nearest modern representative of this language is the Georgian and Basque, an opinion which, it will be remembered, had somewhat fascinated both Westergaard and Rawlinson. The propriety of this classification was, however, doubted by Lenormant, and it has never been satisfactorily established.[7]

[1] Weisbach, *op. cit.* pp. 13, 45. He has since given in his adhesion to the orthodox view. See *Zur Lösung der Sumerischen Frage* (Leipzig, 1897), pp. 16, 36.

[2] *Trans. S. B. A.* iii. 466.

[3] Rawlinson was the first to show that the Alarodians of Herodotus (iii. 94, vii. 79) were probably the Uradhians or people of Ararat of the Assyrian texts. See Sayce on Van, *J. R. A. S.* 1882, vol. xiv.

[4] The knowledge of Kassite is limited to about fifty words found in a lexicon list (Hommel, p. 47, *note* 3). Delitszch denies their relationship to Susian.

[5] Of Hittite it could still be said in 1893, 'So far we know nothing whatever about the Hittite language' (*J. R. A. S.* 1893, p. 404). *Cf.* Conder's notes in the same volume, p. 823.

[6] Mr. Sayce succeeded in deciphering the Vannic in 1893 and 1894 (*J. R. A. S.* 1894, p. 699).

[7] Conder on Lycian, *J. R. A. S.* 1891, p. 614.

CHAPTER VI

DECIPHERMENT OF THE THIRD OR BABYLONIAN COLUMN—HINCKS AND RAWLINSON—A.D. 1846–1851

THE task of deciphering the Third or Babylonian Column led to far more important results, and cannot be so briefly summarised. The earliest inscriptions found in Babylonia were observed to consist of two well-marked styles of writing the cuneiform character. One of these styles was to be seen on the Michaux Stone, published in the Collection of Millin. The other occurs on the numerous bricks that were picked up upon the ancient site of Babylon, and on a number of cylinders. But the most remarkable example of this style was found in the long inscription obtained by Sir Harford Jones and published by the East India Company. The first style is by far the simplest, and it is known as the Cursive or New Babylonian; the other is so elaborate that Grotefend called it the 'Zierschrift';[1] but it is generally described as the Lapidary or Old Babylonian. All the early scholars were struck by the close similarity of the writing in the third column at Persepolis to the first or simplest form of Babylonian. Münter went a step farther, and pointed out that the similarity extended to the Old Babylonian of the brick inscriptions. In the collection of inscriptions made by Mr. Rich, he thought he

[1] *Beiträge*, 1840, p. 60.

discerned three well-marked varieties of writing; but he was able to announce that Grotefend, after a careful comparison, considered that they were all closely related to one another and to the third Persepolitan.[1] It was soon recognised that there are in fact only two varieties of Babylonian, and what Mr. Rich supposed to be a third is due only to the vagaries of the scribe, or, as Rawlinson explained, it 'arises from the distortion of oblique elongation.'[2] It was long, however, before the identification of the two systems was satisfactorily established. In the fifth volume of the 'Fundgruben des Orients' Grotefend demonstrated the essential identity of the third Persepolitan and the simple Babylonian, and in the following volume he illustrated the similarity of the two systems of Babylonian.[3] In 1840 he succeeded in identifying a few lapidary characters with their equivalents in New Babylonian. In his contribution to the subject he endeavoured to render the names of Hystaspes and Darius into the two Babylonian forms.[4] In Hystaspes he seems to have succeeded in only one character—the lapidary sign for 'as'—but his spelling out of Darius was correct, both in the cursive and lapidary forms.[5] He was able also to recognise that certain inscriptions on vases written in the cursive style reproduced in part the same text as those on the bricks written in the lapidary style. With a little farther study he would have been able, from the material collected in this Table, to draw up a short list of equivalent signs in the two systems. As it was, he left this demonstration to be accomplished by Dr. Hincks in a much more successful manner than it was

[1] Rich, *Babylon and Persepolis*, p. 185, *note*.

[2] The third system is seen in Rich, Pl. IX. No. 4. *Cf.* Rawlinson, *J. R. A. S.* x. 24.

[3] *Beiträge*, 1840, p. 7.

[4] See Table, *ib.* p. 65.

[5] See Hincks, *Trans. R. I. Acad.* xxi. 242.

in his power to attempt. He had observed indeed that certain words in the East India House inscription corresponded to those found on the bricks, and he has collected them together in line 19 of his Table, and placed them word for word below the brick inscription for purposes of comparison.[1] But both are in the same lapidary character, and their juxtaposition served only to show that the same words, and possibly portions of the same sentence, were to be found in each. Grotefend, as we shall soon see, had not the smallest idea of their meaning. It was the good fortune of Dr. Hincks to observe that portions of the text of the East India House inscription are reproduced in a fragmentary inscription written in cursive characters and published by Ker Porter.[2] This, as he says, was 'a most important discovery, as the equivalence of certain cursive and lapidary characters which bore scarcely any resemblance to one another was thus demonstrated, as well as the equivalence to each other of different lapidary characters which are constantly transcribed by one and the same cursive character.' By this means he succeeded in drawing up a Table of seventy-six cursive characters, selected from the third Persepolitan column, and placing opposite each its equivalent lapidary sign taken from the East India House inscription.[3]

Hitherto the cuneiform inscriptions known to Europe had been practically limited to the Persepolitan and Babylonian styles of writing. A few examples of different varieties were, however, beginning to crowd upon the bewildered student. Almost the first examples of the

[1] *Beiträge*, p. 33. See Table, p. 72.

[2] Ker Porter, Pl. 78, vol. ii. East India House Inscription, Col. III. lines 15–65. Ap. Menant, *Ecritures*, p. 144.

[3] Nov. 1846; *Trans. R. I. Acad.* xxi. 243–5.

Assyrian style were collected by Mr. Rich in 1820, during his visit to Nineveh, and these were subsequently acquired by the British Museum.[1] In 1827, Schulz found about forty inscriptions at Van, written in a very similar character, and these were published in the 'Journal Asiatique' of 1840.[2] A prism with a long inscription was discovered at Nineveh in 1830, but it does not seem to have become accessible till purchased by Colonel Taylor in 1846.[3] In 1840, Mr. Layard copied an inscription at Malamir that presented another striking variety. But the first period of great discoveries in Assyria had now approached. In 1843, M. Botta, the French Consul at Mosul, began his excavations in the mound at Khorsabad, and he soon uncovered the remains of a palace. He found the doors adorned with monumental bulls, and the walls decorated with bas-reliefs and inscriptions. He described the result in a series of letters to M. Mohl, which appeared in the 'Journal Asiatique' between May 1843 and June 1845. M. Flandin was hastily commissioned to take sketches; but fortunately the task of copying the inscriptions was left entirely to Botta. He faithfully transcribed upwards of two hundred, many of them being, however, exact or slightly varied reproductions of each other. A large collection of sculptures found its way to the Louvre, and the drawings and inscriptions made their appearance in 1849 in the great work 'Monument de Ninive.' Like many similar productions in France, it was executed upon such a splendid scale as to place it practically beyond the reach of ordinary students. The inscriptions were, however, afterwards published separately; and M. Botta

[1] In *Koordistan*, ii. 130, he gives a facsimile of writing from Nimrud. See also *Babylon and Persepolis*, Pl. IX. No. 5. Rawlinson, *J. R. A. S.* x. 27.

[2] *Journal Asiatique*, ix. 257.

[3] Menant, *Ecritures*, p. 170.

contributed a valuable essay on the newly found 'Ecriture Assyrienne' (1848).[1]

Meanwhile Mr. Layard was rapidly accumulating treasures upon even a greater scale for the British Museum. He began to excavate at Nimrud—the ancient Caleh—in November 1845, and speedily brought to light the remains of three buildings, known as the North-West, Central and South-West Palaces. In the following year he extended his labours to Kouyunjik, a mound on the site of Nineveh, where he unearthed a palace of unusual size, which he found had been erected by the son of the Khorsabad king. He was rewarded by the discovery of the vast treasures now preserved in the British Museum—colossal bulls and lions, winged human figures, and many other symbolical objects; long rows of bas-reliefs depicting battles, sieges and hunting scenes, and large numbers of inscriptions. One of the most important of these was found in the autumn of 1846 on a black obelisk in the central palace of Nimrud. It consists of two hundred and ten lines, and enjoys the distinction of being the first purely Assyrian inscription that was ever deciphered.[2] Of scarcely less importance was the discovery of an inscription upon the pavement where the names and titles of five kings were clearly recorded. Their names could not indeed be read as yet, but sufficient was already known from a comparison with the Persian inscriptions to indicate the genealogical relationship of the unknown sovereign. The Assyrian signs for 'king,' 'son of' and a few others had been made out, which left no doubt as to the meaning of the document. It began with the father of the founder of the North-West

[1] In July 1849, 88 plates were out, but not the descriptive text. The work was finally in five volumes folio, and contained 220 inscriptions. The inscriptions were sold separately for 60 francs.

[2] See the drawing of it in Menant, *Ecritures*, p. 168. It is published by Layard, Pl. 53–6, and translated by Rawlinson, 1850, and by Hincks, 1854.

Palace, and ended with the grandson of the builder of the Central Palace. On his return to England, in 1847, Layard wrote an account of 'Nineveh and its Remains,' but the work did not appear till 1849. It was followed in the same year by the 'Monuments of Nineveh,' which contained drawings of the bas-reliefs and copies of the inscriptions.

Two great collections of Assyrian inscriptions were now in the hands of scholars, who found themselves face to face with the difficult problems they suggested. In England the task was divided between Hincks and Rawlinson; but Mr. Norris, Dr. Birch, and Mr. Layard gave valuable assistance in the publication of documents. Mr. Norris was farther engaged in the study of the Susian texts. In France the work was taken up by Botta, Löwenstern and De Saulcy. M. Oppert does not seem to have turned his attention to this branch of the subject till 1857, when for the first time France was worthily represented. Germany was silent, except for a few contributions made by Grotefend in his declining years that added little to the general progress.

Nothing could at first be more bewildering than the immense number of signs. Grotefend counted only a hundred and thirty different characters in the third Persepolitan column. Mr. Fisher, in 1807, found that the East India House inscription contained two hundred and eighty-seven;[1] and Grotefend, in 1837, estimated that the whole of the Babylonian inscriptions known to him contained about three hundred different signs.[2] But Botta encountered no less than six hundred and forty-two at Khorsabad alone.[3] The unskilled eye will be disposed to agree with Löwenstern that at first sight

[1] Hincks, *Trans. R. I. Acad.* xxi. 253.

[2] *Neue Beiträge* (1837), p. 41.

[3] Menant, *Les Langues perdues: Assyrie* (Paris, 1886), p. 135.

the Ninevite character presented no analogy with the Persepolitan, or even with the characters on the Babylonian bricks. In his 'Essai de Déchiffrement' (1845) he was, however, the first to point out that a large number of them do really correspond to the third Persepolitan; and he based his attempted interpretation partly upon the analogy he had discovered.[1] In his first Essay, of 1846, Hincks also stated his belief that 'the third Persepolitan agrees in character with the Babylonian and with the Assyrian writing in Schulz's inscriptions.'[2] Löwenstern afterwards admitted that he would scarcely have recognised the similarity from Schulz's plates; but it became clearly apparent in the more perfect drawing of Texier.[3] Indeed he was eventually so much struck by the resemblance that he hesitated to classify the Persepolitan with the Babylonian in preference to the Assyrian; in fact, he ultimately persuaded himself that it was nearer the Assyrian. Meanwhile Botta had begun the minute study of the Assyrian character to which later investigators owe more than they are always willing to acknowledge.[4] Those whose fortune it is to occupy the higher pinnacles of knowledge are only too prone to despise the humbler artificers who constructed the scaffolding that enabled them to achieve the ascent. Botta arranged the signs with great care into fifteen classes, according to the number of wedges they contain. The first class included all those with one wedge only; and so on up to the fifteenth class, where we find signs composed of fifteen wedges and upwards: though none appear to exceed eighteen. The result of

[1] *Essai de Déchiffrement* (1845), p. 11. Cf. *Exposé des Eléments constitutifs* (1847), p. 11.

[2] *Trans. R. I. Acad.* 1846, xxi. 131.

[3] *Exposé*, p. 14, *note*.

[4] *Journal Asiatique* (4e série, 1847–8), vols. ix–xi. *Mémoire sur l'Ecriture Assyrienne*, Paris, 1848.

his classification was to persuade him that the graphic system of Assyria was substantially the same as that found at Persepolis and Babylon. He accepted Rich and Westergaard as the most faithful copyists of the former, and he compared ninety-six of their signs with those at Khorsabad. He found that seventy-two were so similar that their identity could not fail to be recognised at first sight. Fourteen others exhibit a greater difference, but their identity is capable of demonstration. There are therefore eighty-six signs out of ninety-six concerning which no doubt can exist. He thought the difference was not so great as between Gothic and Latin characters. With respect to the writing at Van, he counted a hundred and twelve to a hundred and fifteen characters, and he found that ninety-eight or a hundred were reproduced identically at Khorsabad.[1] When he began to write upon this subject he had only just received a copy of the East India House inscription, and it was some time before he could hazard an opinion as to the relationship of the New Assyrian to the Old Babylonian.[2] The result of a first study of the two hundred and eighty-seven signs in the East India House inscription was the identification of a hundred and seven of the signs with the Assyrian, and a more careful investigation ultimately raised the number to one hundred and seventy-nine.[3] The remaining one hundred and eight have not, he says, any proper equivalent at Khorsabad. He was inclined to attribute a good deal of the diversity to the material and the instrument used. Where, for example, the stone was brittle, as at Van, the engraver showed a disinclination to make the wedges cross, and the chisel would naturally produce a different effect from the

[1] *Journal Asiatique*, 1848, xi. 248 ff.
[2] *Ib.* 1847, ix. 376.
[3] *Ib.* xi. 249.

impress of a wedge upon soft clay. Much also was, no doubt, due to the individuality of the scribes, who seemed to think they might increase or diminish the number of the wedges according to fancy. Others were simple errors on the part of the original scribe or his copyist, and some may have been intended for abbreviations. He did not believe it possible to establish any fundamental distinctions between any of these styles. Thus he thought the Taylor prism combined the differences peculiar to Nineveh and Babylon so equally that it would be impossible to decide to which class it really belongs. He concluded, therefore, that, notwithstanding considerable apparent variety, there was substantial identity; and that one and the same mode of writing prevailed in Assyria and Babylon, at Van and Persepolis. Indeed he went so far as to suppose that whoever could read a Khorsabad inscription would be able also to read all the others. It is true he could not himself read or pronounce a single word with any degree of certainty;[1] and Rawlinson declared that his special studies afforded him no facility. He could, he says, read the Babylonian of the third column, but he has not 'yet succeeded in identifying a single name in the tablets of Van or Khorsabad.'[2]

At first indeed Rawlinson was much more impressed by the diversity than by the similarity of the signs, and he described them as 'constituting varieties of alphabetical formation.' He divided Babylonian into the writing of the third Persepolitan and that of the bricks and cylinders; the latter he considered was the primitive form 'which must have embodied the vernacular dialect of Shinar, when the earth was of one language and one speech.' Assyrian he also divided into two

[1] Hommel, *Geschichte*, p. 95, *note*. [2] *J. R. A. S.* 1847, x. 28.

classes, Assyrian proper and Medo-Assyrian or Vannic; but he also distinguished Assyrian proper into two subdivisions, representing the lapidary and the running hand—a specimen of the latter being the Taylor prism. The Elymaean inscriptions he placed in a class apart, 'as entitled to an independent rank.' He pointed out that even the third Persepolitan writing is not identical with the cursive Babylonian, and that the variation is sufficient to constitute a serious impediment to study. The writing on the Assyrian cylinders is 'quite distinct from any variety of character which occurs on similar relics at Babylon'; and he found 'characters at Van that never occur at Khorsabad and *vice versa*.' He cannot, therefore, agree with Botta that they all 'belong to one single alphabetical system,' and that the differences are merely 'varieties of hand.'[1] Farther study, however, led him to alter his opinion, and in 1850 he admits that 'there is no doubt but that the alphabets of Assyria, of Armenia, of Babylonia, of Susiana and of Elymais are, so far as essentials are concerned, one and the same. There are peculiarities of form, a limitation of usage—but unquestionably the alphabets are "au fond" identical.' Mr. Layard had also arrived at the

[1] *J. R. A. S.* x. 22 ff. Rawlinson's classification of the writing is as follows (1847):

- Cuneiform Signs
  - 1. Babylonian
    - Babylonian proper
      - Bricks and cylinders (Lapidary) East India House Inscription
      - Cursive
    - Third Persepolitan Column
      - Practically the same as the Cursive Babylonian
  - 2. Assyrian
    - Assyrian proper
      - Lapidary
      - Cursive
    - Van
  - 3. Elymaean (found by Layard at Malamir)

same conclusion. In his opinion, the varieties appear to be mere 'caligraphical distinctions.' [1]

The same important discovery was soon afterwards extended, as we have already related, to include the writing in the second or Susian column of the Persepolitan inscriptions. In 1846, Hincks called attention to the similarity that existed between them. Both the Babylonian and Assyrian modes of writing, he says, 'agree in principle with the second Persepolitan,' and he farther observed that where the characters are the same, they have generally the same, or nearly the same, value in all three.[2] It is curious that Botta was quite unable to trace the existence of this resemblance. Writing of the three columns, he says: 'The elements of the groups are in each quite different, and even when the form agrees the sound is quite different'; and this opinion was shared by Westergaard, who, as we have said, maintained that the various species of cuneiform writing 'differed from one another in the shape of nearly every letter or group.' [3]

A good deal has been said from the time of Botta downwards as to the similarity of the various styles. There is no doubt that they are sufficiently formidable to require a special training in reading each kind,[4] and the Assyrians themselves found it necessary to make transcriptions from the Babylonian in order to make the writing intelligible. There was a greater diversity in the writing of Babylonian than of Assyrian, in consequence of there being no standard official type in the former as there was in the Assyrian,[5] and

[1] *J. R. A. S.* xii. 407. Layard, *Nineveh and its Remains* (1849), ii. 171.

[2] *Trans. R. I. Acad.* xxi. 131.

[3] Westergaard, Copenhagen edition, p. 271.

[4] Bertin in *Trans. S. B. A.* 1885, vol. viii. *Cf.* his article on the Syllabary in *J. R. A. S.* 1887, vol. xix.

[5] Sayce, *Hibbert Lectures*, 1887, p. 13.

consequently a copyist sometimes altogether mistook a sign, and occasionally he was actually unable even to divine its meaning; indeed, so great was the diversity in the manner of writing that the Assyrian scribes made use of Tables of Variants, and in one of these no less than twenty different ways of writing the same sign have been found. On the whole, most students will be inclined to agree with Mr. Budge, who dwells more on the differences than the similarity of the styles.[1]

The demonstration of the similarity of the cuneiform writing of Babylon and Assyria was followed by the more important discovery that the languages expressed by both were the same as that of the third Persepolitan column. The Persian, now deciphered and translated, was thus found to afford a key, not only to the language of the third column, but also to the large collection of inscriptions from Nineveh. Hincks, in a Postscript of June 1846, to which reference will be frequently made, announces that he believes the third Persepolitan 'agrees, to a great extent at least, in language with the Babylonian inscriptions.'[2] In 1848, Botta endeavoured to establish beyond the possibility of doubt that the Assyrian of Khorsabad likewise agreed with the language of Babylon and Persepolis. He showed that the same grammatical inflexions, the same personal pronouns, the same particles, and very many words agreed in all three languages. With regard to the inscriptions at Van, Botta was at first in doubt, but farther study led him to believe that here the inflexions were not the same.[3] This was subsequently fully recognised by Hincks[4] and by most other scholars. It did not, how-

[1] *Athenæum*, Sept. 20, 1884.
[2] *Trans. R. I. Acad.* xxi. 131.
[3] *Journal Asiatique*, ix. 377, xi. 266–71.
[4] *J. R. A. S.* 1848, ix. 414.

ever, prevent De Saulcy from hazarding a translation of one of them on the supposition that it was written in Semitic.[1] In 1850, Rawlinson agreed that both the Babylonian and Assyrian languages are to be included in a common category; but he added that 'they can hardly be called identical, inasmuch as each dialect affects the employment of specific verbal roots and certain particular nouns and adjectives.'[2] They are, in fact, distinguished by certain dialectical differences which have been compared in degree to that existing between the dialects of the West and North of England; but other authorities think the differences scarcely amount to provincialism.[3]

The suggestion that the newly-discovered language would turn out to be Semitic was made at an early period of the inquiry. It had not, however, occurred to Grotefend, who described it, in 1837, as Parsi, and in 1840 he had apparently returned to his original opinion that it was Pehlevi, and he expressly rejected a suggestion of Lepsius that the writing might be compared to Phoenician.[4] Before the decipherment of the cuneiform every conceivable hypothesis had been started as to the probable affinities of the Ancient Assyrian language.[5] At length, in 1845, Löwenstern recollected that the Jewish Scriptures place Assur in the same ethnological division as Heber, and he concluded that Assyrian must therefore have been a

[1] The Armenian inscription Schulz, No. 8, was the one De Saulcy attempted (Mohl, *Vingt-sept ans d'histoire*, i. 350). Nos. 9, 10, and 11 are the trilingual of Xerxes.

[2] *J. R. A. S.* 1850, x. 410.

[3] Boscawen, *The Bible and the Monuments*, p. 18; Pinches, *S. B. A.*, 1882, vol. vii. 'On Assyrian Grammar.' *Cf.* Sayce, *The Science of Language* (3rd ed. 1890), ii. 168.

[4] *Beiträge*, 1837, pp. 24, 37, 39; 1840, p. 65, Plate. *Cf.* above, pp. 184, 299.

[5] See these stated by Löwenstern, *Essai de Déchiffrement*, 1845, p. 12.

Semitic speech.[1] In June 1846, Hincks also announced that 'both Assyrian and Babylonian appear to have much in common with the Semitic languages';[2] and in the following January he stated emphatically that they 'exhibit a much greater similarity to the other Semitic languages than I had at first supposed.' In consequence of this similarity, he now for the first time sets the fashion, afterwards generally adopted, of classifying the signs according to the letters of the Hebrew alphabet, and he endeavoured for a brief time to assimilate the vowel system to the Semitic method.[3] In a tract written in 1847 Löwenstern dwelt with increasing force upon the Semitic affinities of the language; and he considered that Rawlinson is fundamentally wrong in applying the laws of an Aryan speech 'to a writing and a language that are Semitic.'[4] It cannot be said that he contributed much towards the proof of his assertion. He was entirely mistaken in the fundamental principle of his comparison, the supposed similarity of the vowel systems of the two languages; but he pointed out the analogy of a few words, such as 'rabu,' 'great,' to its Hebrew equivalent, and this was the only word which, according to Menant, was then correctly read.[5] In the December previous, Hincks pointed out that the personal pronoun in Assyrian reads 'a-na-ku,' but he left it to the learning of his readers to recognise the identity of this word with the Hebrew. This was afterwards done by Botta,[6] who, however, continued on the whole to be doubtful of the Semitic affinities of Assyrian.[7]

[1] Löwenstern, *op. cit.* p. 13. [2] *Trans. R. I. Acad.* xxi. 131.
[3] *Trans. R. I. Acad.* p. 249–52. [4] *Exposé*, p. 44.
[5] *Ib.* p. 38; Menant, *Ecritures*, p. 224.
[6] *Trans. R. I. Acad.* xxi. 247; Menant, p. 216; *Journal Asiatique*, x. 146.
[7] *Journal Asiatique*, xi. 272.

In 1849, De Saulcy contributed two memoirs on cuneiform, which seem to have added considerably to the proof.[1] In the first he is said to have shown that the two languages agreed in the feminine termination *t* and in the relative pronoun 'sha'; and in the second he identified the particles for 'and' and 'with.'[2] In the following year, Hincks added other forms and words that could be best explained by reference to the Hebrew;[3] and Rawlinson definitely settled the question by an elaborate comparison of its grammatical forms and vocabulary with those of other Semitic languages.[4] Since that time its affinity to the Semitic family has been fully accepted. Rawlinson showed that Babylonian is found in a more primitive state than any other of the Semitic dialects of Asia open to our research. It is held to be the oldest representative of that family yet known, 'the Ethiopic ranking next in point of antiquity.'[5]

Hincks declared that it bears the same relationship to Semitic as Sanscrit to Aryan, an opinion shared by Mr. Sayce and Professor Haupt. It properly belongs to the northern group, which includes Hebrew, Phoenician, Syriac and Chaldee; but there is some disagreement as to the degree of relationship.[6] Mr. King describes it as 'closely akin' to the northern group, while Mr. Pinches considers the differences are often very great, especially in the verbs.[7] Mr. Boscawen finds striking affinities in grammar to Arabic, one of the southern group.[8] It was some time, however,

[1] Sept. 14 and Nov. 27. [2] Hommel, *Geschichte*, p. 95.

[3] 'On the Khorsabad Inscription,' *Trans. R. I. Acad.* xxii. 71.

[4] *J. R. A. S.* xii. 410-16.

[5] *Ib.* p. 414. Prof. Haupt in *J. R. A. S.* 1878, x. 244-6.

[6] King (L. W.), *First Steps in Assyrian*, 1898, Introduction, p. xvii. See Sayce, *J. R.A. S.* 1877, ix. 23. Cf. *Science of Language*, ii. 167.

[7] *Trans. S. B. A.* 1882, vol. vii. 'On Assyrian Grammar.'

[8] *The Bible and the Monuments*, p. 30.

before these opinions prevailed. M. Luzzato, in 1850, still maintained that Assyrian was an Indo-European language;[1] and Holtzmann that it was a Persian dialect mingled with Semitic elements.[2] Botta long remained in doubt, and Hitzig did not hesitate to deny that it is Semitic.[3] So late as 1858 Ewald, the German Hebraist, entirely refused to accept the grammatical forms of Assyrian as Semitic.[4] M. Renan wrote to the same effect in 1859, and he even retained his doubts in the fourth edition of his 'Langues Sémitiques,' published in 1863.[5] The recent discoveries were indeed peculiarly unacceptable to M. Renan. Not long before, he had laid down that monotheism was the special 'note' of the Semitic races, and he was naturally extremely disconcerted by the unexpected apparition in the Louvre of a profusion of Assyrian gods, according as they were dug up by M. Botta. In 1865 we are still assured that Assyrian, 'though of the Semitic type, is only distantly connected with known forms of that language.'[6]

It is much easier to determine the grammatical affinity of a language than to read it, and the place of Babylonian in the family of languages was definitely fixed before much progress was made in the work of translation. From the time that Grotefend's attention was first directed to cuneiform research, he endeavoured to include the second and third columns, no less than the first, within his sphere of inquiry. But he achieved very little success. In his Essay published by Heeren (1824) we find that he had already singled out the groups in the third column that

[1] Menant, *Ecritures*, p. 224.
[2] Mohl, *op. cit.* i. 419.
[3] Evans (George), *Essay on Assyriology*, p. 1.
[4] Evetts, *New Lights*, p. 123.
[5] Menant, *Ecritures*, p. 245; *Langues Sémitiques*, 1863, p. 63.
[6] *J. R. A. S.* vol. i. N. S. Report, May 1865, p. x.

corresponded to Cyrus, Hystaspes, Darius and Xerxes. The Babylonian, unlike the Persian, has no sign to mark the division of the words, and the difficulty attending their separation was at first very great. The process was facilitated when it was recognised that each line begins and ends with a word: that is to say, a word is never divided and carried over from one line to another. In 1837, Grotefend successfully divided eight lines of the Elvend inscription, with only a slight mistake. He also divided the B inscription of Darius nearly correctly: the exception being that at the end of his first line he seems to treat three words as one.[1] Nor was the difficulty confined to the separation of the words only. Some of the signs are so long that they were at first mistaken for two or more letters. Thus the sign for *ar* in the word for Xerxes was treated by Grotefend as *th* and *r*;[2] and Löwenstern divided the sign for *gi* into *r* and *s*, which continued for a long time to be a source of trouble.

In 1840 Grotefend gives a Table to show the transliteration of his four royal names. He reads Cyrus 'Kho . re . s' for 'Ku . ra . as'; Hystaspes 'Wi . scht . as . p' for 'Us . ta . as . pa'; Darius 'Da . r . ha . a . wesch' for 'Da . ri . ya . a . vus'; Xerxes 'Kh . sch . ah . th . r . sch' for 'Hi . si'ar . si.'[3]

We have here sixteen different signs with their values attached; and of these only three (*as*, *da*, *a*) are absolutely correct; though the others give the consonantal values. These values appeared substantially in his tract of 1837, with the addition of 'wo-hu' for the signs that read 'rabu.'[4] Hincks, writing in December 1846, makes the very liberal admission that

[1] *Beiträge*, 1837, Pl. I.; *cf.* Menant, *Manuel de la Langue Assyrienne*, 1880, p. 282. *Beiträge*, Pl. III.; Menant, p. 278.

[2] *Beiträge*, 1840, Plate, p. 65. [3] *Ib.* p. 65. [4] *Ib.* 1837, Pl. IV.

perhaps Grotefend knew the values of ten cursive characters correctly and of ten others approximately.[1]

It will be seen from the transliteration that he recognised some of the signs as syllabic and some as alphabetical. He also knew there was a single sign for 'son,' which, he points out, occurred as *a* in Darius; and he had found three of the equivalent signs for 'king.' It is not improbable that if he had persevered in analysing a larger number of proper names, he might eventually have reached other solid results. Unfortunately, these were not readily accessible. The I inscription, that yielded so much assistance to Burnouf and Lassen, had no Babylonian equivalent; and Westergaard had not yet copied the one at Naksh-i-Rustam. Failing the only true method, he had recourse to another that once more carried him far away to another 'constellation of Moro.'

There was much speculation as to what could be the signification of a certain inscription found on cylinder seals and 'holy' vases, and reproduced with amplification on the bricks collected by Mr. Rich at Babylon. Hager had long ago thrown out the useful suggestion that the brick inscriptions most probably recorded the name of the maker or the builder; but this opinion did not ultimately find favour. It was contended that the inscriptions on the seals and 'holy' vases must have a religious import, and were no doubt used as talismans, in accordance with Oriental custom; and nothing could be more natural than that the same mystical formulae should be impressed upon the bricks, in order to banish the evil demons from the precincts of the building. Grotefend accordingly looked about for guidance, and at length found something to suit his purpose in the Zend-Avesta. He

[1] *Trans. R. I. Acad.* xxi. 242.

collected a number of brick inscriptions together, and placed under them such portions of the inscriptions on seals and 'holy' vases as he found to correspond. They are not, however, exactly alike, for in the latter two or more words are omitted from the middle of the sentence. The first legend contains sixteen words and, according to Grotefend, it runs thus: '(1) Ich erhebe (2) demüthigst (3) den grossen (4) König (5) Mithras (6) immerdar (7) mit Grösse (8) und mit Stärke (9) an diesem (10) öffentlichen Orte (11) Ja (12) ich erhebe (13) diesen (14) grossen (15) König (16) Mithras.' The legend taken from the brick of Nebuchadnezzar (line 13) differs slightly from this. The name of the king or god is not the same (words 5 and 16); and the two words 'öffentlichen Orte,' 'ja,' are also different. At the end, a seventeenth word is added, signifying, as is supposed, 'sei gnädig.' Such was the last attempt at translation before the breaking of the new light. The meaning of this inscription is now known to be: '(words 1, 2, 3) Nabu-kudur-usur, (4) King (5) of Babylon, (6–10) Restorer of Bit-Saggatu and of Bit-Zida, (11) eldest son (12, 13, 14) of Nabu-pal-usur, (15) King (16) of Babylon, (17) I.'[1]

Löwenstern, in his 'Essai de Déchiffrement,' published in 1845, contributed little to the progress of the study. He, however, boldly attempted to pass beyond the guidance of the Persepolitan inscriptions, and to decipher two proper names in an inscription recently found at Khorsabad. The one he selected is engraved over a bas-relief and appears in Botta (Plate 25). The subject evidently referred to the capture of a city, and Löwenstern learned from the Hebrew Scriptures that the Assyrians had only captured four important places. One of these was Asdod, which was taken by Esar-

[1] *Beiträge*, 1840, pp. 56–7, and Plate. *Cf.* Menant, *Manuel*, p. 305.

haddon, and the appearance of sea in the bas-relief left no doubt that this was the place referred to. He had thus ingeniously conjectured the names of the city and the conqueror by independent means; and there was little difficulty in fixing the cuneiform groups in which they were to be found. We have already said that Löwenstern observed the close resemblance between the Assyrian and Persepolitan characters; and he at first thought that the similarity extended to the square writing of the Hebrews. It was by comparison with these that he sought to achieve his decipherment. The name of the town consisted of five characters. The first he did not know, but assumed to be *a*; the second corresponded exactly to the Hebrew 'shin,' the third to the Old Persian *d*; and, pursuing this method, he satisfied himself that he had deciphered 'Asdoh' or 'Asdod.' Botta afterwards pointed out that the word had been improperly transcribed, and that the first sign, translated *a*, was simply the determinative of 'city.[1] As regards the group that should contain the name of Esarhaddon, Löwenstern thought it consisted of three signs. The first, he erroneously stated, had been ascertained by Grotefend to be *r*;[2] the second was already known as *s* in 'Asdod'; the third bore a remote resemblance to the Hebrew 'koph' turned over on its side. It remained to adapt the result, *r s k*, to the name of Esarhaddon. The matter was simplified by Isaiah, who calls the king in whose reign Asdod was captured Sargon. Another reading of this name is 'Sarak,' which is evidently the word in the inscription, the transposition of the *r* and *s* being obviously unimportant. It happened, curiously enough, that

[1] *Journal Asiatique*, ix. 377.

[2] *Cf.* Grotefend, *Beitrage*, 1840, p. 65. Löwenstern's *r* is only the first portion of Grotefend's sign.

Löwenstern guessed the name of the Khorsabad king correctly, but his transliteration was entirely at fault. Two years later, Longpérier pointed out that he had omitted the first sign of the name altogether; and Botta protested against the separation of the second sign into two, in order to evolve *r* and *s*.[1]

In June 1846 Hincks began the series of contributions to the subject which he continued down to the time of his death, twenty years later. In his first paper he tells us he had just begun to apply himself to the third Persepolitan, which, he says, he found to agree in 'character and, to a great extent at least, in language with the Babylonian inscriptions, and to the Assyrian writing in Schulz's inscriptions.' 'In both,' he says, 'some of the characters represent elementary sounds and some [represent] combinations. In both, two or more characters are used to represent the same sounds. In both, no vowel is omitted; but vowels and consonants are repeated in two consecutive characters.' He also 'found it to be a general rule, though it admits of some exceptions, that when a character occurred in two or more alphabets, it had the same value, or nearly so, in all of them. Thus the *pa* of the second Persepolitan is *pa* in Assyrian, and *ba* in Babylonian. He claimed to be able to read the names of 'Babylon' and 'Nineveh' on certain bricks that had been brought from those places.[2]

A few months later he was able to announce that he had 'made considerable progress in deciphering the Babylonian cursive and also the lapidary character of the East India House inscription.' He found that the writing

[1] 'Lettre de Longpérier,' Sept. 1847, in *Revue Archéologique*, 1848, p. 503.

[2] Postscript, written June 1846, to paper 'On the First and Second Kinds of Persepolitan Writing,' *Trans. R. I. Acad.* xxi. 131.

in the third Persepolitan column was identical with the former, or cursive, style, and that its title to be called the 'Babylonian column' was therefore incontestable.

The only predecessor he will allow to have had in this inquiry is Grotefend, who has discovered, he says, that the Babylonian characters are partly syllabic and partly literal; and that 'certain lapidary characters correspond to certain cursive ones.' Grotefend, he adds, may also have discovered the values of about ten cursive characters correctly, and possibly of ten others approximately. But he was not aware that 'several equivalent characters might be in use to represent the same letter or syllable.'[1] Hincks was, however, more adequately supplied with materials to work with. Besides the Persepolitan inscriptions which he had the advantage to study in the more perfect copies of Westergaard, he had also access to the list of provinces at Naksh-i-Rustam lately copied by the same traveller. The discovery that a clay cylinder published by Porter reproduced in cursive characters a portion of the East India House inscription written in the lapidary style had, as we have already seen, enabled him to compare together seventy-six signs in the two different modes of writing. These he now attempted to classify according to what he considered to be their values. The Table is the first of the kind that appeared, and is consequently of very exceptional interest. His decipherment was based in the usual manner upon a comparison between the proper names in the Babylonian and those in the Persian column. 'But,' he says, 'even more [values] were determined by comparing different modes of writing the same word.' His success, so far as it goes, is certainly remarkable. He recognises correctly the

[1] 'On the Three Kinds of Persepolitan Writing,' read Nov. and Dec. 1846: *Trans. R. I. Acad.* xxi. 242.

signs for the three principal vowels, *a*, *i* and *u* (Nos. 1, 4 and 7); a second sign for *u*, used in the late Babylonian, is also correctly identified. The breathing sign is rendered with approximate correctness by *ya* (No 2; *cf*, King 226), and the two diphthongs *ai* and *ia* figure as *yu* and *ya* (9 and 3). The list of consonantal sounds is, of course, far from complete; but it is remarkable that in the great majority of cases the signs are presented to us as syllabic. They even include two compound syllables, 'bar' and 'sar.' They are distributed among twenty-one different sounds: *r* or *er*, *ra*, *ru*; *n*, *na*, *nu*, *ana*; *ba*, *bu*, *bar*; *ak*, *ka*, *ku*; *ta*, *da*; *s*, *as*, *us*; *sa*, *su*, *sar*, and the signs for the plural. It will be seen that this affords a remarkable anticipation of a later discovery. A careful examination will show that, so far as the consonantal sounds are concerned, there are extremely few errors. Indeed, out of fifty-five signs, we have only found twelve radical mistakes in this respect. On the other hand, he was able to give to many signs their absolutely correct syllabic value. At the time of writing he was of opinion that the distinction between *i* and *u* was not observed; and he accordingly classifies together the syllabic ending in either of these vowels. He thought that the same confusion existed among the consonants. He considered that the language did not admit of distinction between *r* and *l*, or between *b* and *p*, or *w* and *m*; nor between the gutturals *k*, *g* and *kh*; nor between the sibilants; and that *ch* is expressed by *s*, and *j* by *k*. He identified the personal pronoun I—*a-na-ku*; and he read the name and titles of Nebuchadnezzar in various inscriptions which Grotefend had mistaken for forms of prayer. He saw clearly the ideographic and determinative value of some of the signs, and fixed correctly upon those for 'and,' 'son,' 'great,' 'earth,' 'one,'

'house,' 'god,' 'man' (two), and another sign for 'king' not previously recognised by Grotefend. He also pointed out two signs for the plural. (December 1846.)

In his paper of January 1847 he increases his list of primary signs to ninety-five, and he analyses the remaining characters found in the East India House inscription published by Mr. Fisher in 1807. He thinks he has been able to assign values to a hundred and ninety-nine of these, and to attach them to some one or other of the ninety-five primary values to which, in his opinion, they corresponded. If this attempt had been successful, he would have arrived at the values of the whole of the two hundred and eighty-seven signs in Mr. Fisher's list, and a few others in addition. But the paper in other respects indicates a retrograde tendency. 'The language,' he says, 'has been brought to exhibit a much greater similarity to the Semitic ones than I had at first supposed.' He accordingly abandons the 'transcription of Babylonian words into Roman characters' and assimilates them to the letters in the Hebrew alphabet.[1] He distributes the signs into classes according as he supposes them to be labials, gutturals, dentals, nasals, linguals and sibilants. He does not attempt to subdivide the classes into surds and sonants, but he separates each class into two divisions, according as he considers that the consonant is followed by *e* (: *sheva*) or by *a* (- *pathac*). 'Values different from these are annexed to the characters which admit them.' In so far as each sign is inseparably attached to one or other vowel the system remains syllabic; but his new table exhibits a strong desire to revert, if possible, to an alphabetical system in correspondence with the Hebrew. His study of the inscriptions at Van enabled him, even at this early date,

[1] *Transactions*, ib. p. 249.

to give 'the mode of expressing numbers in cuneatic characters from 1 to 100,000': a system he farther exemplified in his later paper on the Van inscriptions.

His manipulation of the two hundred and eighty-seven signs induced him to take a much too favourable opinion of his own achievement, for we find him, in the course of the following year (May 1848), announcing that 'the values of the great majority of the [Babylonian] characters are, in my judgment, already settled beyond the reach of criticism,'[1] a statement which we now know is, in fact 'beyond the range of criticism.' By that time he had, however, made the important discovery that Sennacherib and Esarhaddon were the builders of the two palaces at Nineveh. He would not, however, admit that Sargon was the Khorsabad king, a fact that had just been demonstrated with remarkable ingenuity by Longpérier.[2] Hincks suggested that the proper reading was Ni-Shar.

It is worthy of remark that the writings we have just reviewed of Hincks, in 1846-7, were brought to the notice of Continental students by Mohl, in his 'Rapport' to the Société Asiatique of 1848.

It is, in fact, in these essays that the first real progress in the decipherment of Babylonian was made. In them Hincks laid the foundation upon which all subsequent work was raised, a work to which he himself contributed no small share.

The year 1847 was especially rich in contributions to the study. It opened with the remarkable paper we have just reviewed; and during its course Rawlinson expounded his views in the 'Journal of the Asiatic Society,' Botta in the 'Journal Asiatique,' Longpérier in the 'Revue Archéologique.' Löwenstern added another

[1] *J. R. A. S.* ix. 432.

[2] 'Lettre a Löwenstern,' Sept. 1847, in *Revue Archéologique*, 1848.

Memoir of greater value than the first, and De Saulcy made his appearance in this field of inquiry by a paper communicated to the Académie des Inscriptions, and by two essays that have exposed him to much criticism.

Hincks, as we have seen, had worked exclusively upon the Persepolitan and Babylonian texts; but the great discoveries of Botta and Layard soon diverted attention to the more ample materials that were beginning to pour in from Khorsabad and Nimrud. We have already alluded to the enormous number of different signs that were found to be employed in the Assyrian inscriptions—no less than six hundred and forty-two, according to Botta's computation. It seemed incredible that they could all convey different shades of sound. Grotefend noticed that even in the third Persepolitian some signs appeared to be interchangeable, and therefore presumably of similar value; and this peculiarity became even more noticeable in Babylonian.[1] Hincks, as we have seen, noticed 'the equivalence to each other of different lapidary characters, which are constantly transcribed by one and the same cursive character.' In a paper read before the Académie des Inscriptions in 1845, Botta explained that many Assyrian characters of very different form were frequently substituted for one another, and the inference was that there are several signs to express the same, or nearly the same, sound. Rawlinson's attention, up to the present, had been almost entirely fixed upon the Persian column of the Behistun inscription, and his version of it appeared early in 1847. He saw that it afforded the 'only key to the decipherment of the Babylonian alphabet.'[2] We have observed that Grotefend found himself practically limited to four proper names; Löwenstern had only twenty to work

[1] *Journal Asiatique*, 1848, xi. 247. [2] *J. R. A. S.* 1847, x. 24.

upon ;[1] while Hincks and De Saulcy, with the addition of the Naksh-i-Rustam inscription, had forty. From the Behistun and other sources now available to Rawlinson, the number gradually rose to ninety-four ;[2] and with these before him, he began to apply himself to 'the determination of the phonetic powers of the characters.' Among the new names was that of Nebuchadnezzar, which he at once recognised was the same as occurred so frequently on the bricks at Hillah. This discovery was made quite independently of Dr. Hincks ; and Layard is inclined to think that, in actual date, the precedence is due to Rawlinson.[3] He was able already (1847) to announce that he had 'obtained a tolerably extensive alphabet from the orthography of the proper names'; but he adds: 'I have left the grammar and construction of the language hitherto untouched.' He had, however, been greatly struck by the number of signs with apparently equivalent sounds.[4] He found it difficult to admit the existence of variants in the same inscription, except such as were caused by slight changes in the writing of the same character. He saw, however, that no such explanation would cover all the difficulties of the case, for some of the substitutes were obviously totally distinct in form. In this case he did not believe that they were 'legitimately interchangeable.' He thought the 'phonetic organisation of the language was so minute and elaborate that although each form was designed to represent a distinct and specific sound, yet the artist was perpetually liable to confound the characters.' He suggested also that each consonant had a different sign to express the surd and sonant ; and in some cases one might be substituted for

[1] *Exposé*, p. 10, *note.* [2] Hommel, *Geschichte*, p. 98.
[3] Layard, *Nineveh and its Remains*, ii. 173.
[4] *J. R. A. S.* x. 29.

the other. The 'vowel-sounds,' he declared, 'were inherent'; but it was allowable also to represent them by separate signs; and farther redundant consonants were frequently introduced for the sake of euphony. These opinions were immediately traversed by Löwenstern, in his 'Exposé des Eléments' (1847). This tract followed the sudden, though happily transient, conversion of Hincks to the application of the Semitic vowel system to the Babylonian writing. Löwenstern embraced this view with characteristic energy; and it was adopted also by De Saulcy, in whose case it became one of the chief causes of the ultimate failure of his Assyrian studies.

Löwenstern, as we have said, considered that Rawlinson was fundamentally wrong in applying the laws derived from Indo-European languages 'to a writing and a language that are Semitic.' He absolutely denied that the vowel is inherent.[1] The signs are simple consonants, and they may be used in connection with any vowel sound. The vowels may or may not be expressed, and the signs for them are to a large extent expressive of any vowel sound. One sign he mentions may convey the sound of *hou*, *a*, and *ya*; another of *a* or *ha*, *w* and *ü*.[2] The vowels are, he says, by no means limited to the *a*, *i* and *u* of the Sanscrit, but include also the *e* and *o* and the diphthong *ao*. He entirely disagrees with the opinion of Rawlinson that the equivalent signs have any modified value. He compares Assyrian with Egyptian, and regards the signs that are apparently interchangeable as simple 'homophones.' He shows the different ways in which the names of the Achaemenian kings are written; and draws the apparently inevitable inference that the different signs have one and the same sound. 'The

[1] *Exposé*, p. 44. [2] *Ib.* p. 73.

variants,' he says, 'may be used indifferently without violating the phonetic laws of the language.'[1] He was apparently the first to observe that some signs 'express different sounds'; and these he calls 'homotypes.'[2] As was natural, he does not appear to have had any idea of the importance of this discovery. His homotypes seem limited to the signs for vowels, any one of which may express almost any vowel sound, and also aspirates and liquids; and he observed that *m* and *w*, and *y* and *i*, are each expressed by the same signs.

His present pamphlet indicates how rapidly the study was progressing. He now relies entirely upon the analysis of proper names, in accordance with the suggestion of Longpérier; and he abandons his attempted comparison with the form of the Hebrew letters. He surrenders his reading of 'Ashdod,' and suggests 'No Kaschzar' in place of it; and he even doubts the identity of Arsak and Sargon. He thinks he has discovered from the Naksh-i-Rustam inscription that the sign he mistook for *r* is really *s*, and that his *k* is certainly *n*. Accordingly he reads the word *s ch(kh) n* which somewhat revives his confidence in Sargon.

It is not clear to what extent, if to any, he was indebted to Hincks. His exaggerated Semitism was probably of native growth. He was not yet aware of the age of the Babylonian bricks, as explained by Hincks in 1846: yet he knew the determinative sign for proper names, which apparently was not known to Hincks.[3] Hincks, on the other hand, recognised a sign 'prefixed non-phonetically to the name Ormuzd, and also used by abbreviation for the word "god."' Löwenstern says there is 'no special sign accompanying the

[1] *Exposé*, p. 58. [2] *Ib.* pp. 56, 73.

[3] See No. 21 of Hincks, where it is unnoticed. Cf. *Exposé*, p. 28.

names of the gods.' He, however, recognised a sign as the monogram for 'god'; but when he found it in conjunction with the name of 'Aurmuzd' he treated it as the initial letter, and gave it the definite phonetic value of *a*.[1] Such were the difficulties to be overcome before the determinative for 'god' was recognised. He observed that a word may be expressed by its first and last signs, an early indication of the phonetic complement.[2] Meanwhile Hincks and Rawlinson announced the discovery already mentioned that the apparent equivalent signs in Persian depended in reality upon the vowel that was associated with the consonantal value. It at once occurred to Longpérier that the great difficulty of the Assyrian homophones might be solved by the application of the same principle. If, he says, there is a separate sign for the consonant *m* according as it is followed by *a*, *i* or *u*, 'one can understand how a similar practice, if extended to many consonants, would augment the number of alphabetical signs. He warned scholars not to be too ready to accept the existence of homophones, because he observed that 'according as the work proceeds the number of homophones decreases.'[3]

While these discussions were proceeding, Botta continued his contributions to the 'Journal Asiatique' (1847–8), and afterwards published them in a separate 'Mémoire sur l'Ecriture cunéiforme' (Paris, 1848). He endeavoured to introduce some degree of order among the profusion of Assyrian signs. He drew up a Table, consisting of a hundred and twenty-five signs that seemed to be most commonly used; and under each of these he arranged the signs which he found were some-

[1] *Exposé*, pp. 27, 85–6. Cf. *Transactions*, xxi. 247.
[2] He instances the word for 'earth,' p. 86.
[3] 'Lettre à Löwenstern,' *loc. cit.* p. 506.

times apparently interchanged for them.[1] In this List of Variants we constantly find six or seven signs—sometimes many more—grouped together as of equivalent value. In view of later discoveries, it will be seen how extremely useful this classification might become, for the signs thus brought together were no doubt usually those that contained the same consonantal values. In the meantime, however, Botta was at a loss to find any reasonable explanation. Like Rawlinson, however, he could not believe that any of them were, as Löwenstern maintained, real homophones, or signs having identical values. They must, he thought, be distinguished from each other by some slight shades of sound that were sufficiently near to be easily confounded.[2] He explained, in anticipation of the discovery so soon afterwards made by Hincks, that 'it is possible that the language is syllabic—so far, at least, as that each consonant is represented by a different sign, according to the vowel to which it is joined. Thus, for example, there would be one sign for *b*; others for *ba*, *bi*, etc. In Semitic languages the short vowels have little importance, and therefore the syllable *ba* might be expressed by the sign for *b* only; by the two signs *b* and *a*; and also in certain cases, by the signs that represent *b* in connection with the other vowels.' It will be seen that Botta was very far indeed from being the mere painstaking classifier which it was once the fashion to describe him. He and Longpérier were, in fact, the only two Continental scholars, at present

[1] Rawlinson thus describes Botta's labours. He has been employed in 'constructing a complete table of variants, the frequent repetition of the same word with orthographical variations furnishing him with a key to the equivalent signs: and by these means he has succeeded, he informs me, in reducing the Assyrian alphabet to some manageable compass.'—*J. R. A. S.* 1846, x. 29.

[2] *Journal Asiatique*, 1848, March, xi. 245.

occupied with this subject, who were gifted with any real penetration into its difficulties.

Botta succeeded in dividing nearly the whole of the Bull inscription correctly into its words, but the difficulty of this task was still so great that even he occasionally fell into error. He also first pointed out that the sign Löwenstern mistook for two signs was one and indivisible. He detected the determinative sign for 'country' that is used in the Khorsabad inscription, and he made the important suggestion that the phonetic value of the sign for 'king' is 'sar.'[1] Longpérier at once connected this word with its Hebrew equivalent, and showed that it is used to express the first syllable in the name of the Khorsabad king 'Sar-gin.' He made an attempt to decipher an inscription on the leg of the Khorsabad bull, and he was the first to recognise 'Assur.' His translation runs thus: 'Glorious [is] Sargon, King, great King, King of Kings, King of the country of Assur.'[2] He also showed that 'great' might be expressed by one sign only,[3] which added another step to the discovery of the phonetic complement begun by Löwenstern. This short contribution to the 'Revue Archéologique' shows that Longpérier possessed to a high degree a true aptitude for these studies; and if he had been able to pursue them, he might have vindicated for France a more favourable position than it was her fortune to obtain. The difficulty in these matters of recognising truth from error was nowhere more clearly illustrated than in the case of the identification of 'Sargon' by Longpérier. So far was the correctness of this ingenious suggestion from gaining

[1] *Journal Asiatique*, ix. 378; 'Lettre à Letronne,' *Revue Archéologique*, 1848, p. 466.

[2] Cf. *Rev. Archéol.* 1848, p. 504.

[3] *Rev. Archéol.* ib. p. 503. See Oppert, *Expédition*, p. 123.

immediate acceptance, that we find Hincks subsequently conjectures that the name of the father of Sennacherib should be read 'Ni-Shar.'[1] A later attempt, in 1849, which resulted in 'Kin-nil-li-n'a' showed little improvement. Even in 1850 Rawlinson is still so far afield that he translates it 'Arko-tsin'; and it is not till August 1851 that he accepts 'Sargina,' the reading given four years previously by Longpérier.[2] Yet the question was of no little interest, for it really settled the controversy between Hincks and Rawlinson as to the date of the Lower Assyrian dynasty in favour of the former. It was not till Rawlinson read 'Sennacherib' in a tablet found by Layard at Kouyunjik that he would acknowledge his error, and admit that there was at last found 'a tangible starting place for chronology.' Hincks was satisfied, two years earlier, that he had identified the names of Sennacherib and Esarhaddon.

In June 1849 Hincks read a paper on the Khorsabad inscriptions which shows a great advance upon any contribution yet made to the decipherment of the language. There is evidence in his essay on the Van inscriptions that so early as December 1847 he had practically given up the attempt he made in the previous January to assimilate the Assyrian writing as far as possible to the Hebrew—at least as regards the vowel system.[3] He is now satisfied that the Assyrian maintains a clear distinction between the vowels, and also between the surd and sonant consonants at the beginning of a word, though at the end the two sounds were confounded. He points out that no distinction is made between the sounds of *w* and *m*, and, he adds, between *l* and *r*; but he afterwards correctly admits the independent existence of these sounds in his

[1] *J. R. A. S.* Dec. 1847, ix. 439. [2] *Athenæum*, Aug. 23, 1851.
[3] *J. R. A. S.* 1848, vol. ix.

Syllabarium.[1] He has also definitely arrived at the conviction that the Assyrian characters are wholly syllabic or ideographic—in a large number of cases they are both. He will not now admit that any of them represents a simple consonant. He has still no doubt that there are many homophones. Many characters appear to have precisely the same values, 'though much fewer than might be inferred from a mechanical comparison of inscriptions and observance of interchanges.' He recognises the existence of polyphones, already described by Löwenstern in 1847 as 'homotypes.'

'Many characters,' he says, 'admit of two or more kindred values, the distinction between which would appear not to have been considered so great as to require different modes of representing them.' This discovery was so perplexing that he doubted how best to present it to the reader: 'Whether it is more desirable to give different values to the same character, or to give it one value only, with a warning to the reader that he may, under certain restrictions, substitute another for it at his pleasure.'

But the chief importance of his present essay consists in the light it throws for the first time on the nature of the ideograms. The earliest inquirers leant to the opinion that the language was at least partly monogrammatic, though Grotefend was inclined to regard these signs more in the light of abbreviations. He, however, distinctly pointed out the existence of ideographic characters in the shorter inscriptions at Persepolis. In 1846 (December) Hincks recognised a sign that was used 'by abbreviation for the word "god"'; and he noticed that 'besides having a phonetic value, it is used as a non-phonetic initial before the name of Ormuzd.' In the same essay he gave numerous other

[1] 'On the Khorsabad Inscription,' *Trans. R. I. Acad.* xxii. 12.

instances of the existence of ideographic and non-phonetic determinative signs.[1] In 1849 he added for the first time the true phonetic value (*an*) for the sign for 'god';[2] and in the present essay he shows the various uses to which ideographic signs may be applied. He explains that many phonetic characters also express words; these may be considered as abbreviations, though possibly some 'originally denoted ideas and thence, in process of time, the initial sounds in the words which express them.' A second class resemble the mixed signs of the Egyptians: they may represent words by themselves, but they sometimes require the addition of complements. Another class never have complements, nor any phonetic value except in compound nouns, of which the word they represent forms an integral part. The ideograms, however, that give rise to the most interesting speculation are those that have phonetic values, but where the words that denote the ideas they express have no phonetic relationship to the phonetic value of the ideogram. For example, we now know that the phonetic value of the ideogram for 'god' is *an*; but this syllable forms no portion of the Assyrian word for 'god,' which is *il–u*. A glance over any table giving the syllabic values of ideograms will show how extensively this peculiarity prevails; and its recognition soon led Hincks to the important deduction that the writing was borrowed from some other people where the phonetic value of the ideograms was in some sort of agreement with the initial sound of the word they represented.[3] Hincks dwelt on the great difficulty

[1] *Transactions*, xxi. 241, 247.

[2] *Ib.* xxii. 328; *Athenæum*, Sept. 21, 1850, p. 1000.

[3] 'It will appear,' he says later on, 'that I consider the syllabary to be of Indo-European origin.' In 1852 he adds: 'The characters all represent syllables, and were originally intended to represent a non-Semitic language.' *Transactions*, xxii. 57; *ib.* p. 295.

of deciphering a language in which the characters are sometimes used as phonetic syllables and sometimes as ideographs. In each case it was necessary first to determine in which sense it occurred, and, if in the latter, the pronunciation could only be ascertained when it was found spelt out phonetically in some known word. For example, the pronunciation of the ideogram for 'god' was fixed by finding that it formed the *il–u* in 'Bab–ilu.' When the pronunciation of the ideogram was known, it afforded, as has been said, in the majority of cases no clue whatever to the syllabic value of the sign, and the transliterator was liable to fall into the error of reading a word ideographically instead of phonetically, just as frequently as to mistake ideograms for phonetics. Compound ideograms were also not infrequent, where two or more were used to express an idea, but without reference to the sound. For example, the word for 'palace' is composed of two ideograms, *bit* and *rab*, meaning respectively 'house' and 'great'; but Hincks warned the reader that he might fall into a serious error if he were to suppose that they are employed in conjunction phonetically, and that 'bitrab' is the pronunciation of the Assyrian word for 'palace.'[1] He shows that several ideographs may be used as simple determinative suffixes to words which are phonetically complete without them. The determinatives probably all originally represented words, and many of them preserved their phonetic values.[2]

[1] *Transactions*, xxii. 25. In this case, however, it is so. Hincks afterwards instanced *an*, which, followed by *ac*, he reads, not 'anac,' but 'nabu.' *Athenæum*, Sept. 21, 1850.

[2] He explained this matter with great clearness in 1850, when he showed that the sign for *an* is used (1) as a simple phonograph in some words, as in 'zarangu'; (2) elsewhere it occurs alone as an independent ideograph for 'god,' and forms the plural 'gods' by the mere addition of the plural sign. (3) Again, it is found before the proper names of gods, as before Aurmuzd. Here the name is phonetically complete without it, and it is

This inquiry into the nature and use of ideograms was the first that had been made, and it formed an important contribution to the knowledge of the language. His attempted transliterations are not of equal value. He rejected the reading of 'Sargon' given by Löwenstern, and he does not seem to have heard of the solution of the difficulty proposed the year before by Longpérier.[1] He recognised indeed that the sign for 'king' with which the word begins forms an integral portion of the name, but he did not perceive, like Longpérier, that its counterpart is the Hebrew 'sar'; and he was led by other comparisons to assign the value of 'kin–nil' to the ideogram. He knew also that the sign Löwenstern had broken up into two and thought signified *r*, *s* formed in fact a single sign, which he pronounced *ri* or *li*. These efforts resulted in 'kin-nil-li-n'a,' which might seem even less manageable than the *r*, *s*, *k* of Löwenstern. But Hincks was quite equal to the occasion, and, with the customary imaginative faculty of the philologist, he found no difficulty in connecting this person with the Chinzirus of Ptolemy, who, it appears, was a contemporary of Porus. He had already detected that the names of the son and grandson of this prince were Sennacherib and Esarhaddon, the builders of Kouyunjik and the South-West Palace of Nimrud. The first we find he transliterated 'Sanki' or 'Sankin,' with the possible addition of 'rav' or 'ram'—'Sankin-rav': the other came out as 'Adar-ka-dan.' He also explains how he arrived at 'Nabiccudurrayuchur' for

therefore simply a non-phonetic determinative. (4) Elsewhere it forms part of a compound ideograph, and may entirely change its phonetic value; and (5) it may be used ideographically for 'god' in Semitic proper names, where its value is not *an* but *ilu*, or sometimes *Assur*.—*Transactions*, ib. pp. 27–30; *Athenæum*, *ib.*

[1] He admits in Sept. 1850 that he had not yet seen Longpérier's paper *Athenæum*, Sept. 21, 1850).

Nebuchadnezzar, and how he fancied he had found 'Jerusalem'; but these instances only serve to illustrate the great obstacles that had still to be overcome. We have already mentioned the suggestions that were made first by Longpérier and afterwards by Botta with the view of reducing the number of homophones. Hincks confesses he had not seen the essay of the former, and we have not observed that he has acknowledged his obligations to Botta, though he was evidently acquainted with his work, as we see from an unpleasant reference to 'a mechanical comparison of inscriptions.' It was, however, upon the principle these writers suggested that Hincks was now about to solve one of the greatest difficulties of the language. The solution is contained in an Appendix to the essay just reviewed, and was sent to press on January 19, 1850, the same day that Major Rawlinson read his first paper to the Asiatic Society. Hincks now explains that there are four distinct vowel sounds in Assyrian, *ā*, *a*, *i* and *u*; but the difference between the first two was not maintained when they preceded a consonant.[1] He laid down that every sign represented a consonant either preceded or followed by one of these vowels. Therefore, each consonant was represented by seven signs, thus: *cā*, *ca*, *ci*, *cu*; *ac*, *ic*, *uc*. He thought there were at least fifteen consonants, and that the syllabary was of Indo-European origin, and need not therefore, as he had at first supposed, be adjusted to the Hebrew alphabet. The principle thus announced has been accepted with some modifications. The difference between the long and short *a* has not been maintained in this connection, and consequently the

[1] He explained, however, that his short *a* corresponds to the Greek epsilon (*Transactions*, p. 10). In his list the consonants followed by *ā* are really those followed by *a*, and those followed by *a* correspond to the consonants followed by *i*. His view of the four vowels dates from the paper on Van, Dec. 1847 (*J. R. A. S.* 1848, vol. ix.).

syllabic representation of each consonant is reduced from seven to six. His statement that the difference between surd and sonant is maintained at the beginning but not at the end of the syllable has also been admitted. We have thus separate signs for *ba*, *bi*, *bu* and *pa*, *pi*, *pu*; but the signs for *ap*, *ip* and *up* answer for both. Hincks's consonants have been accepted without material change. His *y* has been omitted and *h* added; *z* has been substituted for *j*. Two signs for *k* to represent *Caph* and *Koph*, and two for *t* to represent *Teth* and *Tau* have been added, where Hincks only had one for each, so that the number of consonants is now raised to seventeen. Not only did Hincks arrive at a correct theory of the simple syllables, but he identified correctly a very large number of the signs corresponding to them. Of the seventy-one he gives in his Table at least fifty-seven are accurate, and possibly even more. He closed the essay with a brief specimen of a translation from the Khorsabad inscription.

This Essay of Hincks exercised a decisive influence upon the future study of Assyrian. It demonstrated that, although the language was Semitic, the mode of writing was not Semitic; and for a time it divided scholars into two opposing camps. Those who followed Hincks maintained that the language was syllabic, and that each sign expressed a consonant associated with an inherent and invariable vowel. Those, on the contrary, who sought to assimilate it to the Hebrew system were of opinion that the signs represent simple consonants that might be preceded or followed by any vowel. We have noted the gradual recognition of the syllabic nature of the Assyrian writing. The earliest opinion was that the signs were both syllabic and alphabetical, and we have seen that Grotefend in his transliteration treated them in this manner. Hincks

in his first Essay followed the same method, but he found the vast majority of the signs were syllabic, and his Table shows only four that are purely alphabetical. Then came the discovery that the language itself was Semitic, and the inference naturally followed that the writing was so likewise. Under the influence of this conviction, Hincks drew up his Second Table, showing only the consonantal value of the signs, and leaving them to be associated indifferently with the vowel sounds. But he remained in this opinion for a comparatively short time, and in the end of the same year he had reverted to his original view. The effect of the present essay was to establish the absolute syllabism of the language; and in a paper read shortly afterwards before the British Association 'On the Language and Mode of Writing of Assyria' (August 1850), he 'maintained, in opposition to all other writers, that the characters had all definite syllabic values, there being no consonants, and consequently no necessity or liberty of supplying vowels.' In this opinion he then stood alone. Rawlinson, in reply, expressed his belief that the signs had a syllabic origin, but that they were 'subsequently used to express a mere portion of a syllable.' 'He could,' he says, 'adduce numerous instances where the cuneiform signs were used as *bona fide* letters.'[1]

In France, the opinion Hincks expounded in his second essay took immediate root. The logical instincts of the French mind clung with desperate tenacity to the conviction that a Semitic language could only be expressed by a Semitic mode of writing. Löwenstern at first (1845) thought that the signs represented some sort of mechanical union of consonant and vowel: that is to say, that there was a fixed portion of the sign to

[1] *Athenæum*, Aug. 24, 1850, p. 908.

represent the consonantal sound, and a variable portion to indicate the conjunction of the vowel. 'The signs,' he said, 'reproduce in part the same forms differently combined, which suggests a syllabic union in many of the signs.' But he subsequently became the most thorough-going champion of the alphabetical theory. Botta only just found it 'possible to conceive that the language was syllabic,' yet he followed Longpérier in the luminous suggestion already described.[1] Even De Saulcy was haunted by dim fears that, after all, Assyrian might turn out to be syllabic, and the consistency with which he adhered to the opposite or Semitic mode of writing rendered his subsequent studies almost valueless. Rawlinson, as we shall soon see, yielded in time, and his transliteration of the Behistun inscription shows small traces of his early heresy, which he was still ready to defend in August 1850.

Such was the progress already made in decipherment when Rawlinson at length gave to the world some of the results of his labours in the same field. It will be remembered that in the autumn of 1847 he succeeded in taking a copy of the third column of the Behistun inscription. Whatever leisure he could command during the year 1848 and the early part of 1849 he devoted to its study; and when he returned to England in the autumn of that year, he brought the translation home with him. The work of publication was one of great difficulty, in consequence of the multitude of strange characters in many languages that had to be reproduced and corrected; and although Rawlinson remained in England till 1851, he was obliged to leave before it was accomplished. Some Continental writers chose to make this delay a matter of complaint against

[1] *Essai de Déchiffrement*, p. 11; cf. *Journal Asiatique*, 1848, xi. 246.

Rawlinson, whom they accused of deliberately withholding his copies for personal and selfish motives. It would be difficult, however, to mention anyone who was at that time at all likely to profit by their possession. The special qualifications of a decipherer are by no means common, and M. de Saulcy at least gave decisive proof that he did not possess them. M. Oppert, on the other hand, was still absorbed in the Persian and Median versions. But these gentlemen, and those who then shared their feelings, write as though Major Rawlinson had appropriated the rock of Behistun as well as the copy of the inscription that covered it.[1] They seem to forget that if they were prepared to undergo the same sacrifice and overcome the same difficulties, they could in a few weeks procure copies for themselves. What would have been more natural than to give the commission to M. Flandin, whose enterprise in such matters had already been so conspicuously illustrated? Nothing, however, could be farther from their intentions. They had no notion of foregoing the luxury of feeling aggrieved with the English soldier whose energy, like his genius, so far out-soared their own. Rawlinson was, we submit, fully justified in the course he adopted. He had obtained his copy at great personal sacrifice; no one in Europe was so qualified to accomplish the task of decipherment as himself, and the eighteen months he devoted to the task was not excessive. The subsequent delay in publication was incident to the nature of the work itself, for which he was not responsible.

He, however, lost no time in placing the general results at which he had arrived before the public. On

[1] Thus Löwenstern, writing in 1847, before the third column was taken, says: 'Rawlinson a, durant nombre d'années, interdit au public savant la vue des trésors dont il s'était réservé de faire un usage si utile à sa gloire.'—*Exposé*, p. 10.

January 19 and February 16, 1850, he read papers before the Asiatic Society 'On the Inscriptions of Assyria and Babylon,' and these, with a few additional notes, were published in March of that year.

He tells us he had found more than eighty proper names in the trilingual inscriptions, including those in the Behistun; and 'by a careful comparison of the duplicate forms of writing' them in the Persian and Babylonian columns he had been able, by means of the former, which were known, to determine the values of about a hundred Babylonian characters. The next step was by a collation of the inscriptions to ascertain 'the homophones of each known alphabetical power.' By this means he 'added nearly fifty characters to those previously known through the Persian key.' He confessed that his knowledge of the Babylonian characters was at present limited to these one hundred and fifty characters.[1] From the direction of his studies we may infer that these signs were chiefly taken from the trilingual inscriptions; and in that case they would be practically exhaustive; but they would amount to less than one half of those in general use in the Assyrian text.[2] The same process of comparison with the Persian translation enabled him to draw up 'a list of about two hundred Babylonian words of which we know the sound approximately and the meaning certainly.' But in addition to these, he was able, by 'an extensive comparison of similar or cognate phrases, to add about two hundred meanings certainly, and a hundred more, probably, to the vocabulary already obtained through the Babylonian translation.' He was

[1] *J. R. A. S.* xii. 404.

[2] Mr. King has given a list of 329 signs (*First Steps in Assyrian*, p. cxxxii.). Conder reckons about 550 in all ('On Hittite Writing,' *J. R. A. S.* 1893, p. 829).

thus acquainted with the meaning of about five hundred out of a vocabulary which he estimated as containing five thousand words.[1] These words, he explains, 'are almost all found either in their full integrity or subjected to some slight modification in Assyrian'; and they enabled him 'to arrive at a pretty correct notion of the general purport of the phrases in which they occur.' Although his vocabulary was still limited to one-tenth of the vocabulary, it embraced 'all the most important terms in the language'; and he found it sufficient for the interpretation of the historical inscriptions.

The present Memoir was intended simply as introductory to the subject, and he did not give a list of the one hundred and fifty signs with their values attached. We cannot, therefore, institute a comparison as yet with the Syllabarium already drawn up by Hincks. It is sufficiently clear, however, that he had not, at the time of writing the Memoir, realised the essentially syllabic character of the language. There are, he says, 'cases where a single alphabetical power appertains to the sign,' and, he adds, 'it cannot certainly be maintained that the phonetic portion of the alphabet is altogether syllabic.' 'There is,' he observes, 'an extensive syllabarium; but at the same time many of the characters can only be explained as single consonants.' There is no indication that he had as yet apprehended the principle that governs the combination of consonant and vowel, as recently expounded by Hincks, and which is interwoven with the whole structure of the language. Indeed he says distinctly: 'I have neither adopted, nor do I conceive it possible to adopt, any system with regard to the employment of the vowels in Assyrian and Babylonian.' In some other respects also he was still behind the great Irish scholar. Hincks, for

[1] Menant, in 1864, reports 6,000 words, *Ecritures*, p. 256.

example, had laid down that the distinction between the consonantal sounds is uniformly maintained; and the truth of this statement has been since confirmed. Rawlinson was, however, still of opinion that 'the gutturals and sibilants everywhere interchange.' 'There is the greatest possible difficulty in distinguishing between *k*, *d*, and *t*. *L* and *v* interchange.' It is evident also that he had still much to learn from his rival on the subject of the ideograms. It may be doubted indeed how far he had as yet apprehended the important place they occupy. 'The names of the gods,' he says, 'are represented by signs which appear in some cases to be arbitrary monograms, but which are more generally either the dominant sound of the name or its initial phonetic power.' He thought, for example, that the monogram for Bel was simply the letter 'B,' an idea that is wholly unfounded. He is of course aware that there are many other ideograms besides those used for the gods, but he gives them no sort of prominence. He, however, attributes an ideographic origin to the syllables. 'When a sign represents a syllable,' meaning apparently a compound syllable, 'I conjecture that the syllable in question may have been the specific name of the object which the sign was supposed to depict; whilst in cases where a single alphabetical power appertains to the sign it would seem as if that power had been the dominant sound in the name of the object.' But this is a purely academical question. The important point lay in precisely the opposite direction, and attention had been already called to it by Hincks. The peculiarity most necessary to emphasise is that in a vast majority of cases the pronunciation of the ideogram has no relation whatever to the name of the object it represents, nor, when it has a syllabic power, to the phonetic value of

the syllable. Rawlinson, however, did good service in the present Memoir by laying down the first rudiments of the grammar, a branch of the subject that Hincks subsequently did much to elucidate; and he was also the first to bring into prominence the polyphonic character of the language. Hincks had indeed remarked that 'many characters admit of two or more kindred values'; but Rawlinson farther shows that 'certain characters represent two entirely dissimilar sounds—sounds so dissimilar that they cannot be brought into relation with each other.' He gives as an example the sign for the vowel *a*, which also conveys the sound of 'bar.'

But the great distinction of Rawlinson lay in his unequalled power of translation. Large numbers of Assyrian inscriptions were now before the world. The 'Monument de Khorsabad' had appeared in 1848; Layard's collection followed in 1849, and included the inscription on the Black Obelisk found in 1846. So far only a few words had been made out with more or less of accuracy; but nothing had yet been done in the way of a connected translation. The few lines of the Khorsabad inscription which Hincks attempted in the Addenda to his paper (Feb. 26, 1850) had not as yet appeared.[1] Rawlinson, however, observed that many of the common expressions used at Behistun were adopted almost verbatim from the Assyrian annals; and it was the discovery of these known passages in the Assyrian inscriptions that first encouraged him to undertake their translation. He disclaimed all pretensions to be 'a complete master of the Assyrian language'; and he still speaks of it as to a great extent unintelligible. 'The first outwork,' he says, 'has been carried in a hitherto impregnable position, and that is

[1] *Trans. R. I. Acad.* xxii. 70.

all.' Indeed he is so discouraged by the difficulty of the task that he is sometimes disposed 'to abandon the study altogether in utter despair of arriving at any satisfactory result.' In consequence of the profusion of ideograms in proper names, he finds that their 'pronunciation is a matter of exceeding difficulty, nay, as I think, of absolute impossibility'; and it was in this department that he achieved the least success. He, however, passes in review many of the principal inscriptions that were then known, and analyses the contents of each.[1] He begins with the earliest in date, the one taken from the North West Palace at Nineveh, which he ascribes to King Assur-adan-pal—really Assur-natsir-pal. He passes on to the inscription of his successor, whom he calls Temenbar II. (really Salmaneser II.), which covers the Black Obelisk, and it is to it that he devotes the largest share of attention.[2] His analysis, partly a verbal translation and partly a summary, fills no less than seventeen pages, and the achievement cannot fail to elicit unqualified admiration. The unfortunate failure to identify a large proportion of the proper names gives to it an unreal appearance that no doubt strikes the modern student unfavourably and may at first lead him to exaggerate its deficiencies. If, however, he is careful to remember that it is the first attempt of the kind ever made, his feelings will soon turn to astonishment that so much should have been correctly made out of what had hitherto been absolutely unintelligible. He may profitably compare a few passages with a modern version. For example, Temenbar begins: 'At the commencement of my reign

[1] He refers to the British Museum series recently edited by Layard and Birch.

[2] *J. R. A. S.* xii. 430 ff. The greater part, if not the whole of the Obelisk inscription was translated before the publication of Layard's book in 1849. Layard, *Nineveh and its Remains* (1849), ii. 192, *note*.

after that I was established on the throne I assembled the chiefs of my people and came down into the plains of Esmes, where I took the city of Haridu, the chief city belonging to Nakharmi.' A recent translation of the same passage runs: 'At the beginning of my reign when on the throne of the kingdom I had seated myself in state, my chariots and [my] armies I assembled. Into the depths of the land of Simesi I penetrated; Aridu the strong city of Ninni I captured.' Again Rawlinson translates: 'I went out from the city of Nineveh and crossing the Euphrates I attacked and defeated Ahuni, the son of Hateni, in the city of Sitrat, which was situated upon the Euphrates, and which Ahuni had made one of his capitals. Ahuni, the son of Hateni, with his gods and his chief priests, his horses, his sons and his daughters and all his men of war, I brought away to my country of Assyria.' The modern version says: 'I departed from Nineveh; the Euphrates I crossed at its flood; I marched against Akhuni, the son of Adini. The country of Shitamrat, a mountain peak on the banks of the Euphrates, he made his stronghold. The peak of the mountain I captured; Akhuni, with his gods, his chariots, his horses, his sons, his daughters and his army, I carried away and to my city of Assur I brought'; [1] and so on through the events of thirty-one years of the reign of the great king. On the other hand, it would be too much to say that even the sense is always preserved. There are, in fact, many and serious divergencies from the correct translation as it now stands, after more than forty years' continuous study. It is impossible that it could have been other-

[1] Cf. *J. R. A. S.* xii. 432-3; *Records of the Past*, N.S. 1890, iv. 39-40. The translator is Father Scheil, who has not thought it worth while to mention the name of his great predecessor. From what he says the reader might suppose the inscription was first translated by Oppert (p. 37).

wise with the means then at hand. The wonder is that so much could have been accomplished with one hundred and fifty imperfectly understood characters; and with only five hundred words arrived at conjecturally out of some six thousand. Rawlinson himself warned the reader that here and there 'little dependence can be placed on the translation'; and he confesses that sometimes he could not 'conjecture even the meaning of several passages.' Notwithstanding his difficulty with the proper names, a host of new ones were now for the first time identified: Amanus; the Hittites; Chaldaeans; the rivers Tigris, Euphrates, Belikh; the cities of Borsippa, Tyre, Sidon, Gabal, Caleh. On the other hand, the Akkadians now make their first appearance in modern history as 'Hekdi,' 'which may be connected with the Armenian "Haik."' Hazael of Damascus is still concealed as 'Khazakan of Atesh' and 'Jehu the son of Omri' appears as 'Yahua the son of Hubiri,' 'a prince,' says the translator, 'of whose native country I am ignorant.' He called attention to the name of Yehuda in a Khorsabad inscription in connection with that of Hamath; but he hesitated to identify it with Judah. Indeed at this period he could not bring himself to believe that the son of the Khorsabad king was Sennacherib and his grandson Esarhaddon, as Hincks ventured to assert.[1] The signs for Sargon he transliterated 'Arko-tsin,' and those for Sennacherib, 'Bel – – Adonim-sha'; but Esarhaddon came out almost correct as 'Assar-Adan.' He concludes his paper by an analysis of the inscriptions found at Khorsabad, containing the annals of 'Arko-tsin.'

It was not till the following year, and till after Rawlin-

[1] He thought the dynasty of Nimrud flourished B.C. 1300–1200, and the later dynasty of Khorsabad from B.C. 1100–1000. *J. R. A. S.* xii. 471.

son's return to Persia, that the publication of the third column of the Behistun inscription was completed. It fills the fourteenth volume of the 'Journal of the Royal Asiatic Society,' and the greater part of it was laid on the table before May 1851.[1] A portion of the expense was defrayed by a Government grant, made at the suggestion of Lord John Russell; and the volume consists of seventeen large plates containing the cuneiform text with transliteration and a Latin translation. Then comes an 'Indiscriminate List of Babylonian and Assyrian Characters,' with their phonetic powers, and also such ideographic values as had been ascertained. The list includes two hundred and forty-six principal signs, many of which are followed by others varying in form; and generally representing the different methods of writing found at Persepolis, Babylon and Nineveh. An analysis of the text, extending over a hundred pages, follows, but it has not been carried farther than to the end of the first column. The 'Memoir on the Babylonian and Assyrian Inscriptions' is even more incomplete. It covers only sixteen pages, and breaks off in the middle of a sentence, before the analysis of the second sign was concluded. No explanation is given of this abrupt termination.

The discovery of a separate sign for each combination of vowel and consonant, explained by Dr. Hincks in his Appendix of January 1850, no doubt exercised considerable influence on Rawlinson,[2] and we are now in a position to recognise the full effect it produced in the progress of the study. How far Rawlinson independently

[1] 'The cuneiform text accompanied by a transcript in Roman characters and an interlineary Latin translation was printed' before May; see Report, May 1851, *J. R.A. S.* xiii. p. vi. The complete volume appeared in January 1852 (*ib.* p. 199). Rawlinson returned to Bagdad in the autumn of 1851 (*Memoir*, p. 171).

[2] *Trans. R. I. Acad.* xxii. 56.

divined the existence of some such principle is by no means clear, but we have no doubt that when he read his first paper to the Society he was still of opinion that the alphabetical system entered largely into the Assyrian language. 'Many of the characters,' he then said, 'can only be explained as single consonants.'[1] In accordance with this view, when he had occasion to refer to the Assyrian characters, he uniformly gives them purely alphabetical values, although in many cases their correct syllabic values had been already definitely fixed in Hincks's Essay.[2] Hincks himself pointed this out in one notable case. In 1850, Rawlinson said that the suffix of the third person plural is a simple *n*; but soon afterwards Hincks showed that the consonantal termination is followed by *u*. This opinion Rawlinson adopted in 1851, and remarked of the word 'Yatipsu,' 'the termination in *u* marks, of course, the plural number like the Hebrew.'[3] 'When,' says Hincks, 'the commentary was published [in 1850] no *u* could be discovered. The sign he now reads *su* was a simple *s*.'[4] These facts are not sufficiently accounted for by the explanation Rawlinson

[1] The report of his lecture, given in the *Athenæum*, leaves no doubt on this point. It says: 'Major Rawlinson could not admit that the phonetic system was entirely syllabic, as had been sometimes stated. There was no doubt an extensive syllabarium, and the literal characters, moreover, required a vowel-sound either to precede or follow the consonant: *but such vowel sound was rarely uniform.* He preferred, therefore, distinguishing the literal signs as sonant and complemental, *and leaving the vowels to be supplied according to the requirements of the language*' (*Athenæum*, March 2, 1850). And in August of the same year he vindicated the use of *bona fide* letters, in opposition to Hincks, who maintained that 'the characters had all definite syllabic values' (*Athenæum*, Aug. 24, 1850).

[2] For example, he describes the signs for *ut* and *ti* as *t*; for *bu* and *bil* as *b*; for *la* and *li* as *l*; *su* as *s*, and *ku* as *k* (*J. R. A. S.* xii. 405, 406, 424, 433). Hincks already knew that the signs indicated *ti, bu, la, li* and *ku*.

[3] Cf. *J. R. A. S.* xii. 413, xiv. p. xi.

[4] Hincks, *Trans. R. I. Acad.* 1852, xxii. 306, *note*. *Cf.* Rawlinson, *J. R. A. S.* xii. 406.

gives in his present Memoir. 'In the articulation *kat*, for example, which is composed of two characters, *ka* and *at*, either one or other of these signs must represent a simple letter rather than a syllable; and as this peculiarity of expression pervades the whole Assyrian alphabet, I think I am justified in still adhering to the statement which I announced last year, that the phonetic signs were in some cases syllabic and in others literal.'[1] However this may be, he now finally abandons the description of the signs as letters, and no simple alphabetical values are to be found in his 'Indiscriminate List.' There can be little doubt that the alteration in the method of writing is to be best explained by a corresponding change of opinion.[2] However great may have been his obligation to Hincks, he soon made the discovery his own. He corrects the errors and supplies the deficiencies of his predecessor. He suppresses the twofold signs for *a*, and limits the regular syllabic combinations to the three vowels *a*, *i* and *u*, which thus yielded six instead of seven values for each of the consonants. Following Hincks, he accepts only fifteen distinct consonantal values, but he prefers to use *z* and *kh* in place of the *j* and *g* of Hincks, now written *z* and *ḫ*. With these he has given one hundred and seven simple syllabic combinations, a much larger number than really exists; but he has no less than seventy-eight correct, out of a possible number that slightly exceeds eighty.[3] He, however, took no account of the signs that indicated the exceptional combinations with the vowel *e*, which amount to about a dozen. This defect was soon afterwards noticed

[1] *J. R. A. S.* xiv. 4.

[2] Dr. Hommel has, however, come to a somewhat different conclusion, *Geschichte*, p. 99.

[3] Menant estimates 'the necessary simple syllables' at eighty-two, though this number is slightly modified in practice (*Manuel*, p. 6).

by Hincks, who, however, signally failed in his attempt to identify them. On the other hand, we are now introduced for the first time to the compound syllables that form so large a portion of the Babylonian signs. These, unlike the simple syllables so successfully treated by Hincks, consist of two consonants separated by a vowel. It is true that a few made their appearance in Hincks's short translation from the Khorsabad inscription (February 1850), such as 'sib,' 'kun,' 'bul' and 'gur,' along with three others that are incorrect.[1] We also learn from a later publication that before the appearance of Rawlinson's Syllabarium Hincks knew the values of upwards of twenty other compound syllabic signs.[2] But they do not seem to have been made known to the world, and they all, with the exception of five, are now met in the Syllabarium for the first time. Rawlinson gives sixty-eight of these syllables, and no less than fifty are correct. He has been unable to give any phonetic value to sixty out of his two hundred and forty-six principal signs, but in several cases he has determined their ideographic meaning. The distribution of the signs, as explained by Hincks, considerably diminished the number of supposed homophones, and the compound syllables now enumerated tended in the same direction. But Rawlinson dwells with increasing bitterness on the extreme confusion introduced into the language by polyphones. He complains that 'after years of laborious research he has overcome the difficulty to but a limited extent.' 'The meaning of a word,' he says, 'may be ascertained from the trilingual inscriptions, or from its occurring in a variety of passages with only one possible signification; but

[1] *Trans. R. I. Acad.* xxii. 70.

[2] See those marked H 1849 or 1850 in 'Assyrio-Babylonian Phonetic Characters' (*Trans. R. I. Acad.* 1852, xxii. 293, ff).

unless its correspondent can be recognised in some Semitic tongue it is often impossible, owing to the employment in it of a polyphone character to fix its orthography; and this uncertainty presses on the student with almost crushing severity.'[1] In addition to this, he had to contend with the difficulty that besets all early decipherers—the inability to distinguish between his own correct and incorrect values, where the latter often cause more confusion than if the sound were still regarded as doubtful. Notwithstanding all these obstacles, his transliteration was sufficient to afford a considerable knowledge of the nature of the language; and to enable the student to recognise the connection of the words that resulted with their Semitic relatives. In the forty years that elapsed between the version we are now considering, and that given by Dr. Bezold, a whole army of scholars has been ceaselessly at work upon the Babylonian and Assyrian inscriptions, and the point they have reached is naturally far in advance of that in which it was placed by the first Essay of Rawlinson. The comparison of a few passages, taken almost at random, will enable the reader to appreciate the position the study had reached in 1851.[2] The first lines of the inscription are rendered thus by Rawlinson, De Saulcy and Bezold.

PARAGRAPH I.

Raw.	X	Ha	Kha	ma	ni	s	a		melek[3]
De S.		A	Kh	m	n	s	ah		sar (?)
Bez.		^{m}a	ḫa	ma	ni	iš	'		šarru

[1] *J. R. A. S.* xiv. 3.

[2] For Rawlinson see *J. R. A. S.* vol. xiv. Plate 1; for De Saulcy, *Journal Asiatique*, 1854, iii. 95; for Bezold, *Die Achämenideninschriften*, p. 24.

[3] The sign for 'king' was written 'melik,' after the Hebrew, till it was seen that the Assyrians pronounced it 'sarru' (Menant, *Manuel*, p. 265). In Rawlinson's analysis he points out that one of the terms for 'king' was certainly 'sarru,' as in the Window inscription of Darius at Persepolis and

Raw.	(—)		(——)		x	Par		sa	i		melek		
De S.			sar	i	?	F(ar)		s	i		sar		
Bez.						par		-sa	-a-a		šarru		

Raw.	X	Par	su	X	Da	ri	ya	sar		melek			
De S.	?	F(ar)	s	D		r	ia	s		sar			
Bez.		par	su	^{m}	da	ri	i'a	muš		šarru			

Raw.	ki	ha	m	i	gab	bi	at	t	u	a	ab	u	a
De S.	r	a	m	i	t	b	at	t	ou	a	at	ou	a
Bez.	Ki	a	am	i	gab	bi	at	tu	u	a	abu	u	a

Raw.	X	Vas	ta	s'	pi	abi	sa	X	Vas	ta	s	pi	
De S.		Is	t	s	p	at	s		Is	t	s	p	
Bez.		^{m}uš	ta	az	pi	abu	ša		^{m}uš	ta	az	pi	

Paragraph II.

Raw.	X	Ar	ya	ra	m	n	'a	abi	sa				
De S.		ar	ia	r	m	n	ah	at	s				
Bez.		^{m}ar	i'a	-ra	am	na'		abu	ša				

Raw.	X	ar	ya	ra	m	n	a	X	Si	s	pi	s	
De S.		ar	ia	r	m	n	ah		Ch	s	p	s	
Bez.		^{m}ar	i'a	ra	am	na	'		^{m}ši	i	pi	iš	

Raw.	abi	sa	X	si	s	pi	s	X	Ha	kha	ma	ni	s a
De S.	at	s		Ch	s	p	s		A	kh	m	n	s a
Bez.	abu	ša	^{m}	ši	iš	pi	iš	^{m}	a	ḫa	ma	ni	iš '

Raw.	X	Da	ri	ya	sar	melek	ki	ha	m	i	gab	bi	
De S.	D		r	ia	s	sar	r	a	m	i	ts	b	
Bez.	^{m}	da	ri	i'a	muš	šarru	ki	a	am	i	gab	bi	

Raw.	a	n	eb	(?)	bi	ha	g	a					
De S.	a	n	k		m	a	d	a					
Bez.	a	na	lib		bi	a	ga	a					

Paragraph III.

Raw.	ha	ga	ni	ul	tu	abu	t	(——)					
De S.	a	d	n	s	t	at	t	Nin					
Bez.	a	ni	ni	ul	tu	abu	u	(?)	zeru				

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also at Khorsabad. 'This discovery,' he adds, 'of course tends to discredit the reading of "melik," and to suggest the uniform adoption of "sarru"' (*J.R.A.S.* xiv. p. iii, *note*). The discovery was made by Longpérier in 1847, and he gives the Hebrew equivalent (*Revue Archéologique*, 1848, Longpérier to Löwenstern, Sept. 1847, p. 503). Oppert assigns the credit to De Saulcy (*Journal Asiatique*, 1857, ix. 142), who mentions it in 1849. Hincks seems to have been the first to suggest 'melik' or 'malek' (1849). 'On Khorsabad,' *Trans. R. I. Acad.* xxii. 39.

| | | |

Bez. '[Ich, Darius, der grosse König, der König der Könige, der König der Länder (?)] der Achämenide: König der Schar (?) der Menschen, ein Perser, König von Persien. So spricht Darius der König: Mein Vater [ist] Uštazpi; der Vater des Uštazpi [war Arshâma, der Vater des Arshâma] Ariaramna, der Vater des Ariaramna Šišpiš, der Vater des Šišpiš, [war] Aḫamanis. So spricht Darius der König: Darum [werden wir Achämeniden genannt; von Alters her sind wir erprobt], von Alters her (?) waren unsere Sprossen Könige. So spricht Darius der König: Acht in mitten meiner Familie übten vor mir die Königsherrschaft aus.'

In the August of this year (1851) Rawlinson was able to announce that he had met with an inscription that satisfactorily fixed the date of the Lower Assyrian dynasty. We have said that this was in reality done long before by Longpérier when he identified the Khorsabad king with the Sargon of Isaiah (1847); and by Hincks, who was satisfied that the builders of the later palaces were Sennacherib and Esarhaddon (1849). But we have seen that Rawlinson long refused to recognise these identifications as satisfactorily established. At length, however, he found in a tablet from Khorsabad (Pl. 70 Botta) an account which he acknowledged referred to the capture of Samaria by Sargon in the first year of his reign; and he also succeeded in identifying 'Omri.'[1] He thought that Sargon, whose identification he acknowledged in his Analysis of the Behistun inscription,[2] was the same personage as Shalmaneser, who figures in the

[1] Singularly enough, Hincks had just independently deciphered in the Obelisk inscription the names of Menahem and Jehu the son of Omri. Prof. Wilson, Jan. 1852, *J. R. A. S.* xiii. 198. See also George Smith, *Assyrian Discoveries*, 1883, p. 10. Hincks did not at first recognise Rawlinson's identification of Samaria (see *Athenæum*, Sept. 13, 1851).

[2] *J. R. A. S.* 1851, xiv. p. iii.

same inscription as the conqueror of Ashdod; and he made out the names of other cities that fell before the arms of that king: 'Hamath, Beroea, Damascus, Bambyce, Carchemish.'

But the inscription to which he now more particularly drew attention was recently found by Mr. Layard on a colossal bull at the great entrance of the Kouyunjik Palace; and Rawlinson speedily recognised that it contained the Annals of Sennacherib, its founder, and son of Sargon. The annals extend only to the seventh year of the king, but they recount the subjugation of Babylon in the beginning of his reign, and the defeat of Hezekiah and the capture of Jerusalem in his third year. The narrative agrees with what was already known from the Hebrew writings and from Polyhistor. The discovery, in a cuneiform inscription, of the three names Hezekiah, Jerusalem and Judah, and an account of events related in the Book of Kings, naturally stimulated the interest of a wider public than is generally occupied with archæology.[1] From this period dates the great popularity these studies enjoyed for a time, a popularity that culminated more than twenty-five years later by the despatch of George Smith on a mission to the East by the 'Daily Telegraph.'

A year after the publication of the third column of the Behistun inscription, Hincks read a paper 'On the Assyrio-Babylonian Phonetic Characters' (1852), which may be regarded as having closed the early stage of inquiry into the subject.[2] In this essay he contributes no less than a hundred and eighteen new values, of which sixty-eight certainly, and possibly more, are correct. When these are added to the Syllabarium of Rawlinson, upwards of two hundred correct signs, in addition to those for the vowels and diphthongs, were now at the

[1] *Athenæum*, Aug. 23, 1851, p. 902.
[2] *Trans. R. I. Acad.* xxii. 293–363.

disposal of the decipherer. It had also been proved conclusively that 'the characters all represent syllables and were originally intended to represent a non-Semitic language.' In opposition to the system that still found an advocate in De Saulcy, it was shown that 'instead of the vowels being unrepresented, or only represented by points, as in all Semitic writing that was first applied to a Semitic language, we have in the cuneatic inscriptions every vowel definitely expressed.' This new Syllabarium demonstrates for the first time how extensively polyphony prevailed. Indeed one of its chief merits consists in the enumeration of the different values expressed by the same sign. This had been done to a slight extent by Rawlinson, who puts the polyphones in an apologetic manner in a separate column, under the heading 'Phonetic Powers arising from Ideographic Values.' This excited the contemptuous criticism of De Saulcy, who was still so far from appreciating the true nature of the language that he declared: 'Either this language was for the Assyrian an inextricable *gâchis*, or one or other of these values must be chosen.'[1] The present Memoir of Hincks, which must soon after have fallen into his hands, ought to have convinced him that the former alternative is the only one available. Indeed the number of polyphones is so great that the two hundred and fifty-four characters which Hincks now deals with express no less than three hundred and forty-four different values. In the Appendix to the Khorsabad inscription (January 19, 1850) it will be recollected that he gave seventy-one simple syllabic values, of which we found fifty-seven correct. In a lithographed paper, presented to a meeting of the British Association in the course of the same year, he added to their

[1] *Revue Orientale*, 1852, ii. 162.

number, so that, with the vowels, his contribution amounted to a hundred. These apparently include the twenty-five (correct) compound syllables already mentioned. In the present Memoir he added a hundred and eighteen new values (sixty-eight correct), so that he claims to have discovered by his own unassisted ingenuity no less than two hundred and eighteen values. He acknowledges that he is indebted to Rawlinson for seventy-seven in addition to these, and he states that they were substantially agreed as to the signification of one hundred and seventy-seven signs.[1] They disagree as to forty-nine; but the disagreement, generally speaking, does not extend to the consonantal value; it arises from the doubt as to whether the sign conveys the value of *e* or *o*, as Hincks thought, or of *i* or *u*, as Rawlinson maintained. Hincks frankly confesses he received seventy-seven values from Rawlinson after 1850; but Rawlinson has not told us how many values he borrowed from Hincks during that year. The probability is they were extremely few, if any; the transliteration and translation of the inscriptions taken at Behistun and from the Black Obelisk were made before the Appendix was sent to press, and neither could have been accomplished unless Rawlinson had previously drawn up a very comprehensive list for his own use. No doubt he took full advantage of Hincks's paper to introduce occasional corrections and emendations, and it is to be regretted that he has not gratified our curiosity as to the extent of his obligations.

[1] These figures may be arranged thus:

100 signs valued by Hincks up to 1850. } In these Hincks and
77 signs taken from Rawlinson. } Rawlinson agree.
49 signs, decipherer not mentioned; values disputed.
118 signs newly valued.
344 discussed in present paper.

In the present Memoir Hincks modified in some respects his original mode of writing. Following Rawlinson's example, he has discarded the use of *c* in favour of *k* for the Koph series; and he adopts *s* to express the three Hebrew sounds of *s*, *ś* and *š* (*s*, *ts*, and *sh*). He also follows Rawlinson in substituting *z*, for *j*, and *kh* for *g*. All these modifications have been accepted except the last, which is now written *ḫ*. On one other point, however, he was less conciliatory. In deference to Rawlinson, he drops his two sounds for *a*: his long *ā* becomes now simply *a*; but he insists on the distinct recognition of the union of the consonant with *e* or *o*. 'We must,' he says, 'consider the seven forms which might belong to each.' These forms, therefore, are now *a*, *e* or *o*, *i* and *u*; and one of the chief points of disagreement with Rawlinson is that the latter ignores the sounds of *e* or *o* and substitutes either *i* or *u*. Hincks was quite right in maintaining that Rawlinson unduly neglected the vowel *e*; for his 'Indiscriminate List' only contains one syllable formed with *e*, viz. *ep*. Hincks was, however, wrong in supposing that there is any regular syllabic combinations so framed. The regular syllabic combinations are six, not seven, and they are formed with *a*, *i* and *u* only—as Rawlinson rightly saw. The combinations with *e* are exceptions to the rule, and have been ascribed to local or dialectic changes.[1] They amount to about twelve and, strange to say, only one was correctly identified by Hincks (*te*). The *o* sound seems to be practically unknown.

In the passages we selected to illustrate Rawlinson's transliteration of the Behistun inscription, we placed that given by De Saulcy two years later side by side with it, not on account of its intrinsic merit, but

[1] See Menant, *Manuel*, p. 10.

because of the claims put forward on his behalf by some of his countrymen. It seems to be generally admitted that the honour attaching to the first decipherment of the Babylonian inscriptions cannot be justly claimed by more than three scholars—Hincks, Rawlinson and De Saulcy. We have endeavoured to lay before the reader the contributions made by the first two. There can be no doubt that Hincks displayed remarkable insight into the formation of the language, and that his ingenuity in detecting the value of the signs, and in recognising their relation to one another was very great. Whether he would have been able to go farther and acquire equal distinction as a translator is another question. His genius seems to have been more adapted to elucidate matters of grammar and philology. Rawlinson had a rare ability of assimilating the suggestions of other scholars so quickly as to be almost oblivious that they were not original, and of carrying them rapidly to a perfection that was all his own. Thus Hincks's elementary Syllabarium of 1850 appears in Rawlinson's Memoir of 1851, so vastly improved as to be practically an independent work. But the translation of the inscriptions was entirely his own, and in this department Hincks never entered into competition with him. Here, according to M. Menant, his rival was De Saulcy. It is unfortunate that De Saulcy's early contributions should have become almost inaccessible, and we have not found any detailed account of their contents.[1] They date from 1847, but his earliest efforts, even according to M. Menant, only deserve mention because the author himself was disposed to treat them too

[1] Although the British Museum contains a multitude of tracts by De Saulcy on numismatics and other subjects, those on Assyrian do not appear to be among the number, and we have advertised for them in Paris without result.

severely.[1] On June 20, 1847, in a letter to Burnouf, he attempted to identify some of the kings mentioned in a genealogical fragment found at Van. Ten days later he endeavoured to solve the riddle of the second name in the Khorsabad inscription. In the following July he suggested that the name on the Michaux stone should be read 'Saosdoukin'; and in December he imagined that he had found the sense of the Van inscriptions. He, however, honestly confesses that in the light of subsequent knowledge all these efforts were vain. 'He has,' he says, 'passed the sponge over all he has hitherto done, and has recommenced the study of Assyrian *ab ovo*.'[2]

In 1849, however, he contributed two pamphlets which it is admitted were of greater importance. In the first, which appeared on September 14, he undertook a transcription of the Babylonian column of the Elvend inscription with translation and analysis. He succeeded, we are told, in separating the Babylonian signs correctly, so that each group could be compared word for word with the Persian. In his analysis he is said to have justified the values he attributed to each sign, and the meaning he attached to each word. He regarded the signs as purely consonantal, and sought to bring them all into relation with the twenty-two Hebrew letters. He seems to have thought that some of the signs are capable of division: one portion fixed, representing the consonant, and the other a variable appendix indicating the vowel. In the second pamphlet, dated November 27, he treated the Persepolitan inscriptions in the same manner, but with a growing suspicion that the Assyrian letters might after

[1] *Les Langues perdues: Assyrie*, p. 139. De Saulcy's early contributions were letters to Burnouf, June 20 and 30, 1847.

[2] *Revue Orientale*, 1852, ii. 165.

all turn out to be syllabic.[1] By this means he arrived at the consonantal sound of a hundred and twenty signs which M. Menant says were generally correct. When Rawlinson published his Syllabarium, in 1851 (two years later) De Saulcy observed that sixty-eight of these one hundred and twenty signs received the same values. Not satisfied with this success, he seems actually to have thought that Rawlinson had borrowed them without acknowledgment from him: 'J'avais donc lu et publié avant M. Rawlinson soixante-huit des valeurs exactes publiées par lui; il eût été de bon goût, peut-être, de prendre, ne fût-ce qu'une seule fois, la peine de citer mon nom.'[2] It is, of course, quite impossible to admit the claims made on his behalf. We have not been able to see the signs to which reference is made, but it is quite certain that, in September 1849, there were not sixty-eight signs in the Persepolitan inscription still remaining unknown either to Hincks or Rawlinson. It must be recollected that De Saulcy's pamphlets appeared more than two years after Hincks had already accomplished a somewhat similar classification with a considerable measure of success; and therefore after the consonantal values of a large number of signs had long been correctly ascertained. On the other hand, the earlier papers of Hincks were quite accessible to De Saulcy, and we learn from Mohl that they were well known in France a year before the appearance of his two pamphlets.[3] 'What,' asks M. Menant, 'did Rawlinson owe to De Saulcy's labours on the Assyrian text? It is impossible to say,' he answers, 'for Rawlinson has not given an account of his preliminary studies.'[4] The answer is, however, much simpler than this. Rawlinson owes nothing to De

[1] Menant, *op. cit.* pp. 141–5. [2] *Revue Orientale*, loc. cit. p. 167.
[3] Mohl, *op. cit.* Report, Aug. 1848. [4] Menant, *op. cit.* p. 149.

Saulcy, for the reason that his transliteration of the Behistun inscription was accomplished before he left Bagdad in October 1849,[1] and therefore before it was possible for him to receive even the earliest of De Saulcy's pamphlets. Menant afterwards concedes that Rawlinson's work on the Obelisk proves preliminary labours which he graciously admits may justly claim to be independent.[2] Nor is it true, as Menant says, that 'it was by following De Saulcy's steps that all later progress has been accomplished.'[3] The precise opposite approaches more nearly to the truth. It was by abandoning the alphabetical system, to which De Saulcy clung with strange pertinacity to the last, that all later progress was in reality accomplished; and two months after these pamphlets were written this was precisely what was done by Hincks with unmistakable perspicuity in the Appendix to his Khorsabad Essay.

The two tracts of De Saulcy, written in 1849, gave the transliteration according to his peculiar system of the whole of the Achaemenian inscriptions accessible to him. The text of the Behistun inscription had not, of course, escaped as yet from the jealous hands of the English Major. The translation of these inscriptions was comparatively easy, for it was only necessary to follow the Persian version, which was already known. De Saulcy may therefore claim to be the first who accomplished this task, which neither Hincks nor Rawlinson thought necessary to attempt. But De Saulcy did not rest satisfied with this achievement. On February 3, 1850, he published a transliteration of ninety-six lines of the inscription engraved upon the bulls at the entrance to Khorsabad; and he accompanied it by a

[1] *Memoir* by Canon Rawlinson, p. 159. [2] Menant, p. 151.

[3] *Ib.* p. 146. For an even more enthusiastic appreciation of his services see p. 148.

translation, which two years later he still considered was sufficiently accurate. On February 12, he also contributed a Memoir on the Royal Names at Nimrud.[1] These two publications appeared between Major Rawlinson's lectures of January 19 and February 16. In the first lecture, Rawlinson gave the earliest translation of a purely Assyrian inscription that had ever appeared, with the exception of the few lines rendered by Longpérier and Hincks. It was taken from the Black Obelisk, and he promised to read at the next sitting a *précis* of the Khorsabad inscription.[2] It was clear, therefore, that he had already prepared it. Meanwhile, after this announcement was made, and thirteen days before it was carried into execution, De Saulcy's translation appeared. This forms the second long Assyrian inscription to be translated, and it can scarcely be denied that De Saulcy and Rawlinson had worked upon it independently of each other. The report of Rawlinson's second lecture was given in the 'Athenæum' on March 2. It is, as we have said, impossible to estimate the comparative merits of the two works, because we have not seen De Saulcy's pamphlet. It can only be judged by what we know of that writer's later acquirements.

The transliteration from which we have quoted made its appearance in February 1854, having apparently been sent to press in June 1853, or some three years after Rawlinson's version of the same text.[3] It cannot, therefore, claim the indulgence so willingly accorded to a first effort; on the contrary, it is distinctly put forward as a rival Essay, intended to prove 'the essential error of Rawlinson's method of reading.'

[1] *Sur les Inscriptions de Ninive* (Paris, 1850); *Revue Orientale*, 1852, ii. 168. *Cf.* Menant, *Les Écritures*, p. 225; *Langues perdues*, p. 150.

[2] *Athenæum*, Jan. 26, 1850, p. 105. [3] *Journal Asiatique*, 1854, iii. 93.

It was designed at the same time to show that not one of the general results reached in the two Memoirs of 1849 had now to be abandoned, and also to establish his legitimate right to a large share of priority of discovery to which De Saulcy says he attached great value. We have already disposed of his claims to priority so far as regards the consonantal values of the Babylonian signs found in the trilingual inscriptions, and we are at a loss to imagine in what other direction he fancied that he had achieved priority. So far indeed from his studies having ever been in advance of his contemporaries, they uniformly lagged far behind, and he evinces a singular inability even to follow the results obtained by their genius. A remarkable instance of this is seen in his rejection of Longpérier's reading of 'Sargon' in the Khorsabad inscription. 'The *kh*, *k* or *g*,' he writes in 1852, 'is in reality a *d*'; and in the Table he published in 1854 it is actually found under that heading. He regrets that he is obliged to renounce all hope of finding the 'Sargon of the Bible' at Khorsabad; and he reads 'Sardon' instead.

De Saulcy still adheres to his alphabetical interpretation, and it is no doubt the syllabarium of Rawlinson that is 'the essential error' he sets himself to remove. His transliteration accordingly consists, as the reader will have observed, of an immense agglomeration of consonants which the student is left to bring within the possibilities of human utterance as best he may. It is clearly a comparatively easy task to arrange a number of signs according to the simple consonantal sounds they contain. Hincks reached this point in 1847, and De Saulcy's latest effort seems to carry us back to that rudimentary stage of the inquiry. Here we find the signs distributed among the various classes of gutturals, dentals and so on, exactly as in Hincks's Table seven

years before. It is possible that the later writer is more complete and accurate; it could scarcely have been otherwise, considering the large amount of data now available and the impossibility of not being guided, to some extent at least, by the Syllabarium of Rawlinson and Hincks. Yet in this elementary work of simple classification there are numerous errors he might have escaped if he had condescended to place more dependence upon their authority. Thus, for example, among his gutturals we find (of course bare and stripped of their vocalic garments) the signs for *ip*, *up*, *al* and *zi*. His dentals include two gutturals, the signs for *ga* and *gi*. Among his labials he gives us the signs for *as* and *ku*. Among his linguals are those for *ki* and *su* and they include the signs for the syllables *tar*, *kur* and *rit*; while the sign for *ul* is found among the sibilants. Notwithstanding all his efforts to escape syllabic values, he was forced to enumerate a few—*kam*, *ak*, *akh*, *at*, *bar*, *far*, *in* or *an*, *ar*, *as*, *is*. Some of these are correct; but not even here would he submit to authority, and he has accordingly blundered. His *ak* should be *uk*, his *akh al*, his *far par*, and of the two signs he gives for *as*, one should be *si* and the other *sur*, while his *is* should be *us*. With few exceptions all these might have been found correctly given by Rawlinson three years before. Hincks had long ago pointed out in his Khorsabad Essay (June 1849) that a clear distinction is maintained between the vowels, and between the surd and sonant consonants. Yet here we find the signs for *m*, *w*, *ou* and *b*, and those for *l* and *r* all classed indifferently together. His treatment of the vowels is not less behind the knowledge of the time. The single vowel *a* is represented by no less than seven signs that really express *an*, *a*, *ap*, *i*, *ruh*, *man*, *it*. Two of these

signs, according to De Saulcy, also express *ha*, and one either *e* or *i*. *Ha* has four signs, none correct. They are really the signs for *a*, *it*, *i* and *il*. He was correct in supposing the language contained two diphthongs, *ai* and *ia*; but neither of his signs for *ai* is correct: one has, in fact, the value of *tir*.

It may be said in conclusion that on all points of difference between Rawlinson and De Saulcy, both as regards the theory of the language and the details of its expression, Rawlinson was right and De Saulcy hopelessly wrong. De Saulcy was not only unable to teach Rawlinson anything, but, as we have already observed, he was incapable to a very remarkable degree of apprehending the truth from others. He lived for many years afterwards, but his Essay on the Behistun inscription seems to have been the last occasion on which he meddled with cuneiform studies. He probably recognised more clearly than some of his admirers how incompetent he was to make any useful contribution to the subject. It is impossible to refrain from sympathy with him. He tells us he spent a whole year in 'comparing sign by sign and transcribing all the Achaemenian texts without exception.'[1] Nothing is more calculated to overwhelm the mind with despondency than to pass years of fruitless toil amid such arid wastes as these and to discover in the end that the natural ability to make useful application of the knowledge acquired is wholly wanting. For the true genius of a decipherer is a rare gift, and no amount of industry or learning can compensate for its absence. Hincks and Rawlinson possessed it with exceptional intensity. Many of the other scholars whose labours we have reviewed were endowed to a less degree—Grotefend, Jacquet and Lassen. Even Longpérier, in the few lines he

[1] *Revue Orientale*, loc. cit.

contributed to the subject evinced no little aptitude in this direction ; but De Saulcy was singularly deficient in the special qualifications it required. It would have been more worthy of the position he occupied in other departments of study if he could have restrained the irritation that the consciousness of the waste of so much effort could not fail to produce. It was lamentable that he should fretfully pretend to have anticipated the discoveries of Rawlinson, or that he should have presented his own crude performance as a possible rival to his. It would almost seem, from the extreme rarity of his pamphlets, that he endeavoured to suppress the evidence of his failure, and it would be well if his countrymen were to allow his work in this department to pass out of the reach of farther controversy.

The translation of the Babylonian Column of the Behistun inscription was apparently thought at the time to dispense with the necessity of any special publication of the Semitic columns of the other Achaemenian inscriptions at Persepolis and Naksh-i-Rustam. De Saulcy had indeed devoted himself to this portion of the subject in 1849, and Menant informs us that 'all the trilingual inscriptions then known were already translated.'[1] But they do not appear to have attracted the attention of any more competent scholar till 1859, when M. Oppert published a portion of them in the second volume of his 'Expédition en Mésopotamie.' He gave the text, with transliteration and translation of the Window inscription L and B (Darius) ; D and E (Xerxes), and the unilingual H (Darius) from Persepolis ; the long inscription and the three short ones at Naksh-i-Rustam, the K of Xerxes at Van, and the S of Artaxerxes Mnemon at Susa. He also gave a new translation of the Behistun inscription without text or transliteration.

[1] *Langues perdues*, p. 146.

A peculiar feature of his book is that he has made a transcription of the inscription into Hebrew characters. A complete edition of the Babylonian columns of the Achaemenian inscriptions was published by Dr. Bezold in 1882, with text, transliteration, translation and commentary, and is now the standard edition.

We have now brought to a close this tedious history of the various steps that led up to the decipherment of the Achaemenian inscriptions; and we have described the share taken in its accomplishment by a long succession of scholars, from Tychsen to Oppert. The whole of these inscriptions were now interpreted and their contents made known to the world. The difficulties of the cuneiform character, which at first appeared insuperable, were at length surmounted.

The subject for a long time seemed to yield no results at all commensurate to the labour and ability lavished upon it. Its interest seemed to be limited to the arid domains of philology, or at best to throw a sidelight upon a few matters of no great importance in ancient history. Some scholars were gratified to find that their old and greatly maligned friend Herodotus was ascertained to be much more trustworthy than was long supposed; but these were matters that could only affect a small and comparatively worthless class of *dilettanti*. At length, however, there came the great Assyrian discoveries and the apparition in the cuneiform records of 'Jehu, the son of Omri,' and a host of other notabilities of sacred history. The study was raised at once, especially in England, to an entirely different plane of interest. Lectures began to be delivered upon it throughout the provinces; books were written by Vaux, Bonomi, Fergusson, and many others, to explain the subject to the public. The

great work of Layard was quickly followed by a popular edition, and was translated into German. Curiosity was stimulated by the appearance, in 1853, of an account of the results of farther explorations. Whether the new learning would tend to confirm the ancient records or whether it would compel a revision of cherished beliefs began to be debated in many quarters, far beyond the circle of learned societies.

An account of the progress subsequently made in the knowledge of the Assyrian language lies beyond the scope of our present work. It was indeed a happy accident that the power of reading Assyrian should have been acquired just as a countless number of inscriptions in that language were brought to light. Excavations continued at Nineveh and elsewhere under the direction of Mr. Layard during the winters of 1849 and 1850; and in the autumn of 1851, Colonel Rawlinson returned to Bagdad. He was charged with the general supervision of the work, while Mr. Hormuzd Rassam assumed the practical direction in the field. Parliament sanctioned a grant of three thousand pounds, and many large sums were contributed by private individuals, including five hundred pounds from Lord John Russell.[1] Soon after, Rassam discovered the famous inscription of Tiglath Peleser, which afforded the earliest glimpse into a long-forgotten history. In it the genealogy of the Assyrian kings was traced back to the fourteenth century B.C., and the names of no less than twenty-five sovereigns were recorded.[2] The inscription itself was written at a time when Assur was still the capital of the kingdom and Nineveh was too unimportant to be mentioned. Rawlinson was surprised to find that the language was more polished then than at a later time, and he was obliged to admit that

[1] *Memoir*, p. 172. [2] *Ib.* p. 181.

the discovery 'annihilates all my theories about the modernicity of Assyrian civilisation.'[1] Shortly after, he was able to announce that 'all the Assyrian kings mentioned in the Bible have now been identified,'[2] and many others who occur in profane history, so, that almost a perfect list has now been obtained. Two French expeditions were engaged at the same time on the work of exploration. M. Place, from 1851 to 1854, devoted himself chiefly to Khorsabad, though with scarcely the success his perseverance merited. But the chief effort was made by the Commission headed by M. Fresnal, 1852–4, which included M. Oppert among its members, and which concerned itself principally with the exploration of the ruins of Babylon. Meanwhile Southern Babylonia was explored by Mr. Loftus, whom we have already mentioned in connection with Susa; and by Mr. Taylor, the Vice-Consul at Bussorah. It is to their labours during the winters of 1853 and 1854 that we owe the recovery of the history of the Early Babylonian Empire that long preceded even the foundation of Assyria. The forgotten cities of Nippur, Erech, Larsa, Ur and Eridu were once more summoned to surrender the records of a civilisation reaching back many thousand years before the Christian era. In 1854, Rawlinson was able to send home a list of eighteen of the primitive kings of the ancient Babylonia and of twenty other personages of less exalted station; and he records his surprise at the discovery of 'monarchs who must have reigned before the establishment of the Assyrian Empire.'[3] Till then it was generally held that Babylon owed its foundation to the late period of the great Nebuchadnezzar.[4] Early in 1854, a fruitful discovery was made in the Lion Room of the North

[1] *J. R. A. S.* Report, 1853, xv. p. xvii.
[2] *Ib.* Report, 1854, vol. xvi.
[3] *Ib.* Report, 1854, xvi. p. xiv.
[4] *Ib.* xii. 477.

Palace of Assurbanipal at Kouyunjik.[1] Here large numbers of tablets were found, which subsequent investigation showed to consist of lexicons and phrase-books to enable the student to acquire the primitive language of Babylonia, from which it afterwards became apparent the larger portion of the Assyrian literature had been derived. Rawlinson was the first to detect the existence of this language in a tablet sent to him from Larsa by Mr. Loftus.[2] He announced the discovery in a valuable paper, contributed to the 'Journal of the Royal Asiatic Society' in 1855, on the Early History of Babylonia. At that time, however, he had made but little progress in this new study, for he says: 'I have no hesitation in pronouncing the language to be Semitic.'[3] In the following year he found out his mistake, and, having carefully studied the vocabularies from Kouyunjik, he speaks of it more guardedly as 'the Chaldean or Hamitic language of Babylonia.'[4] Six years later, we still hear of the 'Hamitian language, of which not much is yet understood.'[5] For a time it was known also as the Proto-Chaldean;[6] Hincks seems to have been the first to call it by its later name of Akkadian,[7] but Rawlinson was the earliest to make any considerable progress in its study. In 1866, he endeavoured to translate the tablets bearing on astronomy and other scientific subjects; but he found 'the primitive Babylonian language' was so extensively employed in these documents that it was 'advisable to undertake a thorough examination of this ancient and

[1] See Rassam's account in *Trans. S. B. A.* vol. vii. *Cf.* Hommel, *Geschichte*, p. 86.

[2] Bertin acknowledges in 1887 that Rawlinson was the first to discover the existence of the Akkadian language (*J. R. A. S.* 1887, N.S. xix. 644).

[3] *J. R. A. S.* 1855, xv. 221, *note.* [4] *Ib.* Report, 1856, xvi. p. vii.

[5] Talbot in *J. R. A. S.* 1862, xix. 196.

[6] Talbot, *ib.* 1867, N.S. iii. 7. *Cf. ib.* 1873, vi. p. xxix.

[7] *On Akkadian*, 1855.

most difficult language.' The result was that he thought it was intermediate between the African languages and the Proto-Turanian or Finno-Ugrian, which he proposed to classify under the name of the 'Erythean Group.' He considered it came from the uplands of Central Africa, and was the speech of the Akkads or Highlanders. From that circumstance it gradually acquired the name of Akkadian, suggested by Hincks.[1]

The recovery of this ancient language is among the most interesting results of cuneiform discovery. The most ancient records in the world are written in it, and it opens a page of history hitherto entirely unknown. It shows that a Turanian race led the van of civilisation, and was the founder of both the religion and literature of the Semitic people of Irak.

The first period of discovery was now drawing to a close. The French retired in 1854, and Colonel Rawlinson in March 1855. Nearly twenty years were to elapse before the excavations were renewed by George Smith, in 1873.

Meanwhile the number of scholars interested in these subjects began to increase. Dr. Samuel Birch did good service in assisting the publication of Layard's inscriptions.[2] Mr. Bosanquet contributed a large number of articles on the questions of chronology raised by these new discoveries,[3] a matter that also occupied Rawlinson.[4] Hincks also turned his attention to translation, and it is to him we owe the translations in Mr.

[1] *J. R. A. S.* Report, June 1866, N.S. ii.

[2] *Trans. S. B. A.* 1886, ix., article by Mr. Pinches. Dr. Birch's interest in the subject dates from 1846, when he wrote on the discovery of the name of Babylon, in *Proceedings of the Society of Literature.*

[3] See *Athenæum*, Sept. and Oct. 1851; *J. R. A. S.* 1854–5, and many others.

[4] *Athenæum*, March and April, 1854.

Layard's 'Nineveh and Babylon,' published in 1853, and also a version of the Bavian inscription.[1] In 1854 he wrote an essay on Assyrian mythology, but he still continued to be chiefly engaged with the grammar. His dissertation on the Pronoun appeared in 1853; on the Verb in 1855 to 1856, a work that has been characterised as his most valuable contribution;[2] on Akkadian, 1855; on Tiglath Peleser, 1857; on Polyphony, 1863; and finally a treatise on Assyrian Grammar, begun in 1866 in the 'Journal of the Asiatic Society,' which was interrupted by his death. Mr. Fox Talbot was also added to the number of translators. In 1856 he rendered a portion of the East India House inscription, and for a number of years he applied himself to the translation of the most important inscriptions.[3] Mr. Norris, relieved from the burden of the Susian Column, turned his attention to Assyrian weights (1856), and subsequently became known as the author of the first Assyrian dictionary (1866).[4] In France, M. Oppert acquired an interest in Assyrian during his recent journey to the East, and he earned a reputation in this department of study by the appearance of his 'Etudes Assyriennes' in the 'Journal Asiatique,' February 1857. From that period he has continued to be one of the most prolific and the most useful of the cuneiform scholars of France. The number of these was farther increased by the appearance of M. Menant, in 1858, as the writer of a 'Notice sur les Inscriptions cunéiformes de la Collection de M. L. de Laval.'[5] Soon afterwards (1860) he published

[1] Layard, *Nineveh and Babylon*, 1882, p. xlvii.

[2] *J. R. A. S.*. N.S. Report, 1867, iii.

[3] *Ib.* Report, 1856, xvi.

[4] *Ib.* N.S. 1866, ii. The first instalment of the separate publication appeared in 1868 (*J. R. A. S.* Report, May 1868, iii. p. xv).

[5] Mohl, *op. cit.* Report, June 1859.

the 'Ecritures cunéiformes,' an 'Exposé des Travaux qui ont préparé la Lecture des Inscriptions,' which is still a useful apology for the science.[1] For, notwithstanding all the magnificent results already obtained, the science was still in need of an apologist.[2] In 1852, Professor Wilson, the President of the Royal Asiatic Society, went so far as to regard the Assyrian Inscriptions as still 'merely dumb memorials of antiquity.'[3] Very great discrepancies were indeed yet to be found in translations of the same passages by different scholars, and the true meaning of a large number of words continued to be warmly disputed. It was found, in fact, that M. Stern of Göttingen still maintained that the language was entirely alphabetical; that there were no ideographs; and he read every syllable of one inscription differently from De Saulcy, except the proper names.[4] Mr. Fox Talbot attributed the prevailing incredulity 'to the fact that each cuneiform group represents not always the same syllables, but sometimes one and sometimes another': in other words, to the existence of polyphones. Hence it was inferred that the system adopted 'cannot be true, and the interpretations based upon it must be fallacious.'[5] He proposed, therefore, to submit the whole matter to a practical test. He accordingly translated the inscription of Tiglath Peleser, recently found at Kaleh Sherghat, and forwarded it in a sealed envelope to the President of the Asiatic Society. Three other scholars—Rawlinson, Hincks, and Oppert—were then invited to make independent versions of the same inscription, and to communicate them under cover to

[1] Second edition in 1864.

[2] Menant, *Ecritures*, p. 239; *Langues perdues*, p. 165.

[3] *J. R. A. S.* 1852, xiii. p. 196.

[4] Mohl, *op. cit.* i. 418, Report, 1851.

[5] *J. R. A. S.* 1861, xviii.

the Society. Carefully lithographed copies had been executed for this purpose, so that there might be no variation in the text. A competent jury of examiners were selected, among whom were Professor Wilson (the President), Mr. Grote, Dean Milman, Sir Gardner Wilkinson, and Whewell; and on the day appointed the sealed packets were opened in their presence. It was found that Dr. Hincks had not had time to translate the whole, and that Oppert had committed the double blunder of working from a copy executed by himself, and of making his translation in English, a language with which he was imperfectly acquainted. A careful comparison was, however, undertaken, and the Jury issued their report on May 29, 1857. Grote and Milman were of opinion 'that the coincidences between the translations, both as to the sense and the verbal rendering, were very remarkable.' Wilkinson made a separate report, and stated that 'the similarity is quite equal to what it would be in the translation of an ordinary historical inscription in Egyptian hieroglyphics.' Indeed,' he adds, 'the resemblance is so great (very often exactly the same, word for word) that the interpretation could not be arbitrary'; but while 'there is a remarkable concurrence as to the general meaning of each paragraph . . . very many words were differently translated.' The closest resemblance was found to exist between the versions of Rawlinson and Hincks. Talbot was 'less positive and precise,' and Oppert showed the greatest divergence. The examiners farther noted their opinion passage by passage, and as we look down the pages, among many verdicts of 'very near,' 'much alike,' and so on, we find other judgments much less satisfactory, such as 'many coincidences and many variations'; 'some

coincidences and great variations'; and even 'totally different.'

Much indeed yet remained to be done before accuracy could be achieved, and the voice of the doubter was not yet stilled. In France especially, the greatest scepticism prevailed as to the genuineness of the translations, and those of Oppert, in the 'Journal Asiatique' were received with general incredulity.[1] Neither De Saulcy nor Longpérier took any farther share in the work, and their silence increased the discouragement. A very eminent Frenchman, Count de Gobineau, had just written on the 'Ecritures des Textes cunéiformes' and attacked the whole system pursued by Rawlinson and Oppert.[2] The one he proposed to substitute is too grotesque to merit description, but the defection of a scholar so well known in Oriental studies intensified the growing unbelief.[3] It was at this conjuncture that Menant published his book on Cuneiform Writing, in which he related the successive steps that had led up to the decipherment of the inscriptions (1860): an undertaking which he describes four years later, in his second edition, as having slowly produced a beneficial effect. Some people may have been more influenced by the striking reward conferred upon M. Oppert by the Institut in 1860, which awarded him the prize of twenty thousand francs, founded by the Emperor for the 'work or the discovery most calculated to the honour of France,' and this, we learn with surprise, afforded 'une sanction qui devrait dissiper toutes les susceptibilités.' These susceptibilities were, however,

[1] See Menant, *Langues perdues*, p. 177. He refers to *Athenæum*, May 1857, p. 663.

[2] Mohl, *op. cit.* Report, June 1869, ii. 257.

[3] *Ib.* June 1864, ii. 565.

by no means dispelled by any such Imperial mandate. Mohl writes with evident sympathy that 'people decry a language in which one can never know if a syllable is ideographic or phonetic, and, when phonetic, which of two or three different values it may have in that place.'[1] Gobineau still remained recalcitrant (1864), and Sir George Cornewall Lewis contended in the 'Astronomy of the Ancients' that neither Egyptian nor Assyrian could ever be restored.[2] Lord Macaulay also rejected the interpretation with undisguised contempt.[3] It was only by slow degrees that these doubts were finally extinguished, and that the cuneiform languages have conquered the universal recognition of all competent inquirers.

When Rawlinson returned from Bagdad in 1885, he was appointed a Director of the East India Company, and he entered Parliament as Member for Reigate. In 1859 he went to Persia as British envoy, a position from which he retired in the following year.

After his resignation, he devoted himself for some years almost exclusively to his old cuneiform pursuits. He undertook to supervise the publication of the 'Inscriptions of Western Asia,' and he might be found at work upon them daily at the British Museum. Mr. George Smith was appointed his working assistant, and in that position he gained the intimate knowledge of the Assyrian language which he afterwards turned to such excellent account. The first volume of the Inscriptions appeared in 1859, and the last, or fifth, in 1884.[4] Rawlinson entered Parliament once more in 1865, as Member for Frome, but retired on his re-appointment

[1] Mohl, *op. cit.* June 1861, ii. 364.

[2] *Trans. S. B. A.* 1886, ix., article by Mr. Pinches. *Cf.* Report, May 1862, *J. R. A. S.* 1862, xix.

[3] Layard, *Nineveh and Babylon*, new ed. p. xxxviii, *note.*

[4] *J. R. A. S.* 1860, xvii. Report, 1859. *Memoirs*, p. 241.

to the India Office in 1868. He fell a victim to influenza in 1895, at the age of eighty-five. During his life he was gradually overwhelmed with honours bestowed upon him by learned Societies in various quarters of the globe;[1] but a grateful country was long reluctant to confer its seal of recognition. Military authorities are naturally unwilling to acknowledge the merits of distinguished officers who descend to civil employments; and in 1851, after the publication of the Behistun inscription, he had to sue in somewhat humble terms for promotion to the rank of Lieutenant-Colonel. On his return from Bagdad in 1855, when the walls of the Museum were lined with the trophies he had accumulated and the country was enraptured with the new arcana of knowledge his genius had unveiled, Lord Clarendon thought a knighthood worthy of his acceptance. This he hastened to decline, and shortly afterwards he received the more appropriate honour of K.C.B. (1856).

The dignities to which he subsequently rose were due to political services and social position, and seem to have been entirely unconnected with the achievements we have recounted.

As for Dr. Hincks, he appears never to have obtained any reward whatever, unless the Gold Medal of a provincial academy can be regarded as such.[2] He had the misfortune to be born an Irishman, and to fill the obscure position of a country clergyman, so that he was,

[1] For a list of these see *Memoir*, p. 170.

[2] He received the Conyngham Medal of the Royal Irish Academy in 1848 (*Athenæum*, May 1850). Layard has well said: 'In any other country but England a man of such attainments and so eminently calculated to confer honour upon the nation to which he belonged, would have received some reward, or would have been placed in a position of independence to enable him to pursue his studies. But in spite of numerous representations to Government and of the European reputation he had established, he was allowed to remain without any public recognition of his literary and scientific acquirements.'—*Nineveh and Babylon*, new ed. p. xlvi, *note*.

no doubt, reconciled from the first to the inevitable sequence of disparagement and neglect. After all, hieroglyphic figures and cuneiform signs are inconvenient subjects for pulpit oratory, and not likely to edify a rustic congregation or to lead to preferment in the Church. The estimate in which he was held, even in learned circles, may be gathered from the short paragraph allotted to him in the 'Athenaeum,'[1] where he explained one of the most far-reaching discoveries in Assyrian, as compared to the three long columns that follow, devoted to a few unimportant observations made by Rawlinson. But notwithstanding his apparent failure to obtain the recognition that was his due, when the evening of life approached and the time for departure came, he could dwell with satisfaction on the work of his life; and though in the years to come few might remember his name, he could not fail to enjoy the conviction that the rich fields of knowledge he had opened to view would remain the assured possession of man for all generations to come.

[1] Aug. 24, 1850.

APPENDICES

A.—TABLE SHOWING VALUES ASSIGNED TO THE LETTERS OF THE OLD PERSIAN ALPHABET.

B.—TABLE SHOWING THE TRUE VALUES OF OLD PERSIAN LETTERS, AND THE AUTHOR AND DATE OF THEIR DECIPHERMENT.

C.—TABLE SHOWING THE VALUES GIVEN TO EACH SIGN OF THE SUSIAN (MEDIAN) SYLLABARY.

APPENDIX

TABLE SHOWING VALUES ASSIGNED TO THE LETTERS

	Niebuhr Alphabet	Tychsen, 1798	Münter, 1800	Grotefend, 1803–1815	St. Martin, 1823–1832	Rask, 1826	Burnouf, 1836	Lassen, 1836
1		...	...	Defective	...	...	...	...
2		...	Sign of Separation	Sign of Separation	...	...	...	...
3		ĕ	r	e	e	...	...	...
4		l, ĕ	p	e	e	...	k	k
5		ê, t, n	...	s	s'	...	ç	ç
6		...	...	Defective	...	...	...	...
7		l, s	b	v	r	...	b	b
8		...	...	r	...	...	...	...
9		l, ê	...	r	r	...	r	r
10		ê, i(u)	...	e	i	...	i	w
11		...	kh	d	d	...	d	d
12		m, ă, ä	o (vocal)	o	y	...	ô	y, medial
13		m	...	n	n	...	...	t
14		a, ŏ	...	p or b	p	...	p	p
15		ä	...	g	v	...	g	v, initial
16		ă, ä, r	r (fort)	o	e	...	v	î y, medial
17		ä	...	uncertain	...	...	...	...
18		ă	...	gh	e	...	z	z
19		l	...	uncertain	...	...	l ?	k

A

OF THE OLD PERSIAN ALPHABET

Grotefend, 1837	Beer, 1838	Jacquet, 1838	Lassen, 1844	Hincks, June 1846	Rawlinson, before August 1846	Rawlinson, after August 1846	Hincks, Dec. 1846	
...	...	...	...	...	...	...	...	1
...	...	...	...	...	...	...	...	2
...	...	...	...	...	...	...	...	3
e	...	...	k	k	k	k before a & i	k	4
ç	...	...	ç	s	s	s before a i, u ?	s	5
...	...	...	...	...	...	...	...	6
b	...	...	b	b	b	b before a, i, u	b	7
...	...	...	...	...	...	...	...	8
r	...	...	r	r	r	r before a & i	r	9
i	...	v	w	w	w	v before a & u	w ?	10
d	...	...	d	d	d	d before a	d	11
ô	...	...	i		i		i	12
th	...	...	thr	tr	tř	tř	thr	13
p	...	...	p	p	p	p before a, i, u	p	14
g	...	...	v	w before i	v	v before i	w(i)	15
è(n)	...	ch or c	k'	ch	ch	ch before a &	ch	16
w	...	...	...	...	...	...	...	17
gh	...	...	z	zh	z	z before a, u ?	zh	18
w	...	...	k'h	d (before i)	t with i	d before i	d(i)	19

Niebuhr Alphabet		Tychsen, 1798	Münter, 1800	Grotefend, 1803–1815	St. Martin, 1823–1832	Rask, 1826	Burnouf, 1836	Lassen, 1836
20		a	...	Defective	...	...	...	...
21		a	e or a	e or a	a	...	â	â
22		a	...	th	...	...	dh	t'
23		...	a	o	â	m	m	m
24		i(u)	...	t	t	...	t	t
25		d	...	z, changed to k, 1815	h	q	q	with u 36 equal ô
26		n, s	...	i	h	...	y	z
27		b, k, r	...	h	e	...	h	h with 12 equal ê
28		r	...	ng	...	...	h ?	ñ
29		b, r	...	h	e	...	î	'm ?
30		k	...	Defective	...	...	...	...
31		b, x, y	...	tsch	b, changed to m after1826	n	n	n
32		x	...	dj	...	...	gh ? uncertain	g'
33		x	...	k	...	...	gh ? uncertain	g'
34		d, y	...	z	...	...	gh	d'
35		u(u)	...	u	...	...	û	g
36		u, uᵘ	...	u	ou	...	u	u with 10 equal q
37		...	...	Defective	...	...	...	...
38		s	ou, w ii, y	sch, sh	ch	...	ch	s'
39		ŏ	...	f	...	...	f	f
40		s	...	sch, changed to sr, 1815	ch	...	l	s'
41		j, y	...	a	ou	...	a	a, init ŋg, me

Grotefend, 1837	Beer, 1838	Jacquet, 1838	Lassen, 1844	Hincks, June 1846	Rawlinson, before August 1846	Rawlinson, after August 1846	Hincks, Dec. 1846	
...	...	...	...	...	...	...	...	20
â	...	...	â	a	a	a	a	21
m	...	...	d'h	t before u	t'h	t before u	t(u)	22
ŏ	...	..	'm	m	m	m before a	m	23
t	...	...	t	t	t	t before a & i	t	24
k	...	th	q	k before u	kh	k before u	k(u)	25
i	...	...	θ	z	th	th before a, i, u	th	26
h	y	y	j for y	y	y	y before a, i, u	y	27
ng	...	z	z'	j	jh	j before a	j	28
hh	...	...	'm	m before i	m (with i)	m before i	m(i)	29
...	...	...	...	...	...	...	...	30
s	...	...	n	n	n	n before a & i	n	31
dsh	...	...	g'	zh before i	j	j before i	j(i)	32
s s	...	...	ψ	kh before u	m (with u)	m before u	m(u)	33
z ?	...	...	dh	d before u	dh	d before u	d(u)	34
y	...	...	g	g	g	g before a	g	35
u	...	...	u	u	u	u	u	36
...	...	...	...	...	...	...	...	37
sh	...	...	s	sh	sh	sh before a, i, u	sh	38
f	...	...	f	p before r	f	f before a ?	ph(r)	39
r*k* (h?)	...	r before u	'r	r before u	r (with u)	r before u	r(u)	40
ă	h	h	h	h	h	h before a, i, u	h	41

	Niebuhr Alphabet	Tychsen, 1798	Münter, 1800	Grotefend, 1803–1815	St. Martin, 1823–1832	Rask, 1826	Burnouf, 1836	Lassen, 1836
42		ô	...	kh	kh	...	kh	k'
	Later Additions							
43		...	...	...	...	...	...	...
44		...	...	...	...	...	gh ? uncertain	g'
45		...	...	...	...	...	...	...
46		...	...	...	...	..	...	...
47		...	...	King	...	...	..	...
48		...	...	...	...	...	...	...
49		...	...	...	...	...	...	...
	Defective Signs							
		x	i	...	...	...	...	...
		n	...	v	...	...	...	...
		n	...	...	...	...	...	...
		t	kh	...	...	...	...	...
		s'	...	...	...	...	...	...
		...	s	...	...	...	...	...
		...	o	...	...	...	...	...
		...	...	r	...	...	...	...
		...	...	m	...	...	...	...
		...	...	...	h	...	...	...
		...	...	...	...	...	...	t
		...	...	...	...	...	...	v, û, medial

Grotefend, 1837	Beer, 1838	Jacquet, 1838	Lassen, 1844	Hincks, June 1846	Rawlinson, before August 1846	Rawlinson, after August 1846	Hincks, Dec. 1846	
kh	...	...	kh	kh	k'h	kh before a & u	kh	42
...	...	...	...	...	n (with u)	n before u	n(u)	43
g′	...	...	gh	g before u	gh	g before u	g(u)	44
...	...	...	rp	rp	q ?	doubtful final	...	45
...	...	...	...	...	ñ	ñ	ñ	46
...	...	...	...	...	...	...	...	47
v	...	...	d^{a}h	...	dah ?	...	...	48
...	...	...	bumi	...	bum'i	...	...	49
...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	
...	...	...	...	...	...	...	...	

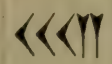
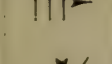
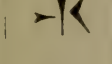
APPENDIX B

TABLE SHOWING THE TRUE VALUES OF OLD PERSIAN LETTERS; AND THE AUTHOR AND DATE OF THEIR DECIPHERMENT

Persian Cuneiform Signs		Correct Values Spiegel, 1881	Name of Decipherer and Date
1		Defective	
2		Sign of Separation	Münter, 1800
3		Defective	
4		k before a	Burnouf and Lassen independently, 1836, k
5		s before a, i, u	Grotefend, 1802, s
6		Defective	
7		b before a, i, u	Münter, 1800, b
8		Defective	
9		r before a & i	Grotefend, 1802, r
10		v before a & u	Lassen, 1836, w? Jacquet, 1838, v
11		d before a	Grotefend, 1802, d
12		i	St. Martin, 1823, y. Lassen, 1836, i

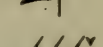
Persian Cuneiform Signs		Correct Values Spiegel. 1881	Name of Decipherer and Date
13		tř	Lassen, 1836, t ? Grotefend, 1837, thr ? th Rawlinson, 1838, tř
14		p before a, i, u	Grotefend, 1802, p
15		v before i	St. Martin, 1823, v
16		c before a	Jacquet, 1838, ch or c
17		Defective	
18		z before a, i, u	Burnouf and Lassen independently, 1836, z
19		d before i	Holtzmann, 1846, d before i
20		Defective	
21		a	Tychsen, 1798, a. Münter, 1800, e or a
22		t before u	Lassen, 1836,
23		m before a	Rask, 1826, m
24		t before a & i	Grotefend, 1802, t
25		k before u	Grotefend, 1815, k
26		th before a, i, u	Jacquet, 1838, th
27		y before a, i, u	Beer and Jacquet independently, 1838, y
28		j before a	Hincks and Rawlinson independently, 1846, j before a
29		m before i	Lassen, 1836, m before i
30		Defective	

Persian Cuneiform Signs		Correct Values Spiegel, 1881	Name of Decipherer and Date
31		n before a & i	Rask, 1826, n
32		j before i	Rawlinson, 1838, j
33		m before u	Rawlinson, 1838, m before u
34		d before u	Tychsen, 1798, d. Lassen, 1836, d
35		g before a	Lassen, 1836, g
36		u	Tychsen, 1798. Grotefend, 1802, u
37		Defective	
38		s (sh) before a, i, u	Tychsen, 1798, s. Grotefend, 1802, sch, sh
39		f before a	Grotefend, 1803, f
40		r before u	Grotefend, 1815, sr
41		h before a, i, u	Grotefend, 1803, a
42		kh before u	Grotefend, 1802, kh
43		n before u	Rawlinson, 1846, n before u
44		g before u	Lassen, 1836, g
		Part of a contraction	
		l ?	Oppert, 1847, l ?
		k h s	Grotefend, 1802, king
		bumi	Lassen, 1844, bumi
		dah	Lassen, 1844, dah

Persian Cuneiform Signs	Correct Values, Spiegel, 1881	Name of Decipherer and Date
	nâma (name)	Oppert, 1874. Weissbach considers these signs of doubtful authority ('Altpers. Keil.,' p. 1).
	puṯa (son)	
	Pârsa (Persia)	
	Auramazda	
	Franâ ?	

APPENDIX

TABLE SHOWING THE VALUES GIVEN TO EACH

The number given to each sign by				Cuneiform Signs [1]	Correct Values [2]	Westergaard,[3] 1844–53
Westergaard and Hincks	Norris	Oppert	Weisbach			
1	...	111	1		Determin.	Aussonderungs Zeichen
2	14	68	2		al; city	?
3	65	42	3		an; det.	A
a	35	89	4		tak	...
4	61	38	7		na	na, N
a	60	ideog.	6		month	...
5	85	56	8		še	sa
6	9	28	9		pu	?
7	...	86	10		muš	?
8	88	104	11		šir, zir	as, ars
9	...	...	...		Defective	?
a	81	51	13		la	...

‚Vowels and consonants are indicated by capital letters.

[1] The signs are reproduced from M. Oppert, *Le Peuple des Mèdes*, 1879.

[2] The values in this column assumed to be correct are taken from Weisbach, *Die Achämenideninschriften*, Zweiter Art., 1890, p. 33.

[3] *Keilinschriften*, Bonn, 1845. *Mémoire des Antiquaires*, Copenhagen, 1844. The values in brackets [*] in this column are from the Copenhagen Edition.

C

SIGN OF THE SUSIAN (MEDIAN) SYLLABARY

Hincks, 1846–7 [4]	De Saulcy, 1849–50 [5]	Norris, 1852–55 [6]	Oppert, 1859 [7]	Oppert, 1879 [8]	
Det.	Ha	Det.	Det.	Det.	1
...	He, E ?	af	up	hal ; city	2
an ; det.	A	an ; det.	an ; God	...	3
...	...	tak	tak	tak, dak	*a*
na	n (a)	na	na	...	4
...	...	month	month	...	*a*
si	s (a)	si	s'i (ḫi ?)	šē, sē	5
...	...	pu	bu	pu, bu	6
...	...	...	mus, vus	mis, vis	7
ersa	ç (a)	sar	ṣir	sar	8
...	...	...	...	...	9
rus	...	lu	la	lu	*a*

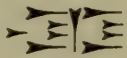
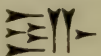
[4] *Transactions R. I. Acad.*, xxi., 241.

[5] *Journal Asiatique*, 4e série, xv., 526. The vowels in brackets in this column are those supposed to follow the consonant.

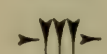
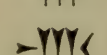
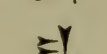
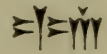
[6] *Journal Royal Asiatic Society*, 1855, vol. xv.

[7] *Expédition en Mésopotamie*, 1859, ii., 71.

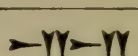
[8] *Le Peuple des Mèdes*, 1879, p. 41.

The number given to each sign by				Cuneiform Signs	Correct Values	Westergaard, 1844-53
Westergaard and Hincks	Norris	Oppert	Weisbach			
10	...	...	...		Defective	ar, A
a	47	61	12		su	...
11	26	16	15		ak	k
a	59	7	16		H	...
b	18	14	17		gau; sea	...
12	34	23	18		tu	thu
a	77	67	19		ar; window	...
13	71	45	20		ra	R
14	10	78	22		par	pha
15	33	21	23		ti	ti
a	57	84	24		maz	...
16	63	40	59		ne	?
a	15	60	26		si	...
17	19	15	27		gi	?
18	...	...	...		Defective	?
19	27	17	28		ik, K	KH
20	31	105	29		kup ?	?
21	...	rejects	25		ziš ?	?
22	99	10	30		hu	ju [yu *]
23	78	48	61		ir, R	ra

Hincks, 1846–7	De Saulcy, 1849–50	Norris 1852–55	Oppert, 1859	Oppert, 1879	
ar	Ar	...	...	...	10
...	...	thu	ṣu	çu	*a*
K	K	ak	ak	...	11
...	...	ven	A', aḥ	Ah, Ih	*a*
...	...	gau	kam, kav	ko, go ; sea	*b*
tu	t, (o, ou)	u	u	to, do	12
...	...	ar	ḥar	har, ar ; arch, window	*a*
ra	rr (a)	ra	ra	...	13
per	p (a)	par	bar	par, bar	14
ti	t (e, i)	ti	ti	ti, di	15
...	...	vach	maś, vaś	maç, vaç, mać, vać	*a*
ser	N	nï	ni	nē	16
...	...	pe	...	çi	*a*
su, sa	Aï	ga	gi	...	17
...	...	...	...	...	18
K	KH	ik	k	...	19
...	...	kwe	...	?	20
...	...	...	kam, kav	Omits	21
yu, u	Hou	yu	ḥu	hu	22
ER	r or l (a)	R	ir	ir, ar, ur	23

The number given to each sign by				Cuneiform Signs	Correct Values	Westergaard, 1844–53
Westergaard and Hincks	Norris	Oppert	Weisbach			
a	22	70	63		kan	...
b	50	ideog.	31		Ship	...
24	72	46	32		ri	ri
25	6	76, 29	21		pe, pat	tu
26	54	80, 81	35		man	ve, we
a	25	75	36		kaš	...
27	13	31	37		ap	P
a	64	97	38		nap	...
28	28	18, 69	39		uk	Q
29	...	65	40		az	pu
a	29	ideog.	41		Horse, Donkey	...
30	43	24	42		at	T
31	17	11	34		ka	ka, kha
32	38	25	50		ut, T	T
33	8	27	51		pi	pi
34	39	20	53		te	phi
a	24	71	54		kar	...
35	45	72	52		am ?	?
36	55	82	56		mar ; road	pe
37	58	36	57		um, M	M

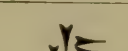
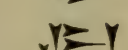
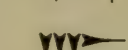
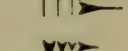
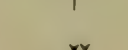
Hincks, 1846-7	De Saulcy, 1849-50	Norris, 1852-55	Oppert, 1859	Oppert, 1879	
...	...	kan	kan	kan, gan	*a*
...	...	he	nun	Ship	*b*
ri	r or l (e, i)	ri	ri	...	24
tu	dè	pa	bi, bat	pē, bē, pat, bat	25
wi	...	van	man, van	...	26
...	...	kas	kas	kas, gas	*a*
ap, pu	GH	ap	ap	...	27
...	...	nabu	nap	...	*a*
wa, K	...	uk	uk	...	28
va	...	..	as′	aç, az	29
...	...	ke	Horse	Horse	*a*
ta, T	TH	T	at	...	30
ku	G (hard) k (a)	ka	ḳa	ka, ga	31
ta, T	t (a)	T	ut	...	32
pi, pu	b or p (e, i)	pi	pi	pi, bi	33
pu, pi	f or ph (e, i)	ṭa	ta	tē, dē	34
...	...	gar	ḳar, gar	...	*a*
...	...	tye, am ?	...	git	35
ner, pi	b or p (e, i)	var	mar, var road	mar, var; head (compound ideog.)	36
M	M or W	M	im	im, M	37

The number given to each sign by				Cuneiform Signs	Correct Values	Westergaard, 1844-53
Westergaard and Hincks	Norris	Oppert	Weisbach			
a	44	106	58		sak	...
38	49	2	60		U	jo [yo *]
39	73	47	65		ru	ru
a	79	90	67		tik	...
b	40	92	66		tup	...
c	69	85	46		muk	...
d	12	79	47		pan	...
e	102	102	48		zik	...
f	70	87	49		tum	...
40	11	77	55		pir	PH
41	4	4	62		E	
42	67	44	68		un	?
a	103	88	64		tan	...
43	23	73	43		kur ; mountain	khu
44	41	22	44		tú	?
45	90	58	45		iš, S	S
46	2	1	69		I	
47	98	6	70		ya	ja, J [y, ya *]
48	66	43	71		in, N	I
49	5	26	72		pá	pa

Hincks, 1846–7	De Saulcy, 1849–50	Norris, 1852–55	Oppert, 1859	Oppert, 1879	
...	...	te	...	sak (ideog.)	*a*
yu, U	M or W, Oû	hu	U	U, yu	38
ru	...	ru	ru	...	39
...	...	ro	sik	tik, dik	*a*
...	...	ṭi	lu, tip	tip, dip	*b*
...	...	no	...	mak, vak	*c*
...	...	pat	pat	pan, ban	*d*
...	..	passan?	sik	sik, zik	*e*
...	...	nos	...	mun	*f*
P	F or PH, f or ph (a)	far	pir	pir, bir (par, bar)	40
...	n (o, ou)	E	I'	Ē	41
na, N	Ô	un	un	...	42
...	...	tin	tan	tan, dan, tin	*a*
ker	...	kar	kur	kar, gar; mountain	43
...	...	tu	du	tu, du	44
S	CH	S	is	is, us, S	45
I	I	I	I	...	46
ya	Ya	ya	ya	Ya	47
N	Y	in	in	...	48
pa	b or p (a)	ba	ba	pa, ba	49

The number given to each sign by				Cuneiform Signs	Correct Values	Westergaard, 1844–53
Westergaard and Hincks	Norris	Oppert	Weisbach			
50	96	63	73		zi	?
51	32	19	74		ta	ta
52	86	55	76		šu	su
a	74	99	77		rap	...
53	36	95	78		tur	T.H.
54	93	64	79		zu	?
55	101	108	75		Man	wo
56	...	110	89		Det.	Aussonderungs Zeichen
57	56	83	90, 91		me, maš	Z
5	46	59	98		sa	?
59	42	93	92		tar	?
60	16	30	93		pa	phu, pu [po *]
a	68	98	94		tin	...
61	75	100	95		rak	?
62	80	37	96		ur ?	?
63	7	32	97		ip, P	T'H
64	89	57	99		aš	S
65	...	...	...		Defective	?
66	94	112	100		Det.	thi
67	51	33	101		ma	wa, W

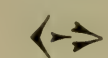
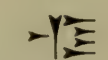
Hincks, 1846-7	De Saulcy, 1849-50	Norris, 1852-55	Oppert, 1859	Oppert, 1879	
ta ?	kch (e, i)	chi	ṣi	ći, ǵi, źi, zi	50
ta	d or t (a)	ta	da	ta, da	51
su	s (o, ou)	su	su	šu, su	52
...	...	rab	rab	rap	*a*
ter	th (a)	tar	tur	tur, dur	53
si	DT	su	s'u	ću, ǵu, źu, zu	54
...	m, w (o, ou)	yo	Man	...	55
Det.	...	Det.	Det.	...	56
sh, wash	Z	vas	mas, vas	...	57
...	...	tha	s'a	ça	58
...	...	tar	tar	tar, dar	59
pu	q (e, i)	po	pa	po, bo	60
...	...	ne	...	tin, din	*a*
...	...	rak	rak	...	61
...	...	re	ur	um, perhaps ur	62
ut, tu	MW, Ou	fa	ip	ip, P	63
as	S	as	as	as	64
...	...	...	...	...	65
...	th (e, i)	Ṣ	Det.	...	66
wa	m, w (a)	va	ma, va	...	67

The number given to each sign by				Cuneiform Signs	Correct Values	Westergaard, 1844–53
Westergaard and Hincks	Norris	Oppert	Weisbach			
68	76	101, 91	102		tuk, raš	ro, r'u
69	21	13	104		ku	qu
70	37	96	103		taš	? [qa *]
71	30	ideog.	107		King †	ku
a	97	41	108		?	...
b	95	74	109		en	...
72	48	5	106		yi; water	H
73	84	53	105		să	s'a
74	91	62	110		za	za
75	1	8	111		A	O
76	3	3	80		U	U
77	62	39	81		ni	ni
78	82	52	83		ul, L; house	?
a	83	50	84		li ?	?
79	52	34	85		mi	vi (wi)
80	92	54	87		ši	s'i
81	20	12	88		ki	kha (ka) [kho *]
82	87	103	86		šin	as' ars'

† Ideogram recognised by Grotefend.

Hincks, 1846–7	De Saulcy, 1849–50	Norris, 1852–55	Oppert, 1859	Oppert, 1879	
rus	Ç	ras	tuk, ras	ras	68
ku	q (o, ou)	ku	ku	ku, gu	69
tas	Q	tas	das	tas, das	70
ku	k (e, i)	ko	ga	King	71
...	...	cho	um?	nu	*a*
...	...	sen	ṭu	kin, gin	*b*
I	A, Ha	hi	A water	Yi; water	72
sa	ch (a)	sa	ša	ša, sa	73
sha	z (a)	ṣa	ṣa	ća, ǵa, ź a, za	74
A	A	A	ḫa	ha, a	75
O, U	Ou (short)	U	U'	O	76
ni	n (e, i)	ni	nu	ni	77
ER	dh (e, i)	al	ul	al, il, ul, L; house	78
...	...	el	li	...	*a*
wi	m, w (e, i), oui	vi	mi, vi	..	79
si	ch (e, i)	ṣi	si	ši, s	80
ku	kh (o, ou)	ki	k	...	81
ersa	Sign for plural	san	sin	san	82

The preceding are the 110 signs given by Menant. The five other signs are

Westergaard	Norris	Oppert	Weisbach	Cuneiform Signs	Correct Values, Weisbach	Oppert
...	53	35	5		mu	mu, vu
...	...	66	33		iz, Z ; det.	ić, iz, iç
...	...	107	82		race	race
...	...	49	...		...	la (found once only)
...	...	109	...		...	Ideog. for animal

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Spottiswoode & Co. Ltd., Printers, New-street Square, London.

A Classified Catalogue
OF WORKS IN
GENERAL LITERATURE
PUBLISHED BY
LONGMANS, GREEN, & CO.
39 PATERNOSTER ROW, LONDON, E.C.
91 AND 93 FIFTH AVENUE, NEW YORK, AND 32 HORNBY ROAD, BOMBAY

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